DRAFT

RCRA FACILITY ASSESSMENT
DRAFT REPORT

of the

INCO ALLOYS INTERNATIONAL, INC.
Huntington, West Virginia 25720

EPA ID Number: WVD076826015

Submitted By:

Division of Environmental Protection
Office of Waste Management
Hazardous Waste Management Section
1356 Hansford Street
Charleston, West Virginia 25301

Submitted To:

U. S. Environmental Protection Agency
Region-III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

March 31, 1993

TABLE OF CONTENTS

(Continued)

RCRA FACILITY ASSESSMENT
DRAFT REPORT
of the

INCO ALLOYS INTERNATIONAL, INC.
Huntington, West Virginia 25720

EPA ID Number: WVD076826015

LIST OF TABLES AND FIGURES

LIST OF FIGURES

I. INTRODUCTION:

The 1984 Hazardous and Solid Waste Amendments **(HSWA)** to the Resource Conservation and Recovery Act **(RCRA)**, has authorized EPA to require corrective action for releases of hazardous waste or hazardous constituents from Solid Waste Management Units **(SWMU)** and other Areas of Concern **(AOC)** at all operating, closed or closing RCRA facilities. The intent of this authority is to address previously unregulated releases to the air, surface water, soil, groundwater and from the generation of subsurface gas. The first phase of the corrective action program, as established by EPA is the development of a RCRA Facility Assessment **(RFA)**. The RFA includes a Preliminary Review **(PR)** of all available relevant documents, a Visual Site Inspection **(VSI)** and if appropriate a Sampling Visit **(SV)**.

A preliminary review of available file documents pertaining to the Inco Alloys International, Inc. **(INCO)** facility located in Huntington, West Virginia, was performed in 1991. A RFA Preliminary Review report was prepared and used as the basis for planning and conducting a VSI of the facility in January 1992. During and subsequent to the VSI, additional information concerning the SWMUs and AOC at Inco was obtained.

The findings are based on a review of files from the West Virginia Division of Environmental Protection (DEP) office in Charleston, WV and documents provided by Inco as well as the VSI performed. This RFA report reflects the results of the PR, VSI, and subsequent information made available by the facility.

A total of sixteen (16) potential SWMUs and eighteen (18) Area of Concerns (AOC's) were identified at the Inco facility in the Phase I Preliminary Review report. As a result of the VSI and subsequently obtained information the total of SWMUs and AOC's have been included in this report. A list of the SWMUs and AOC's are presented in Table 1 at the INCO facility.

Appendix A provides a photograph log. Appendix B contains a copy of the field notes taken during the VSI on January 20-23 1992.

File Search and VSI

This RFA report is based on a review of file material available at the West Virginia Division of Environmental Protection (DEP), Office of Waste Management (OWM), Office of Water Resources, Air Pollution Control and EPA Regional office, located in Philadelphia, PA, and on observations made during the VSI. The file review was conducted in September 1991 and included a review of RCRA, CERCLA, Air, and NPDES files available at the West Virginia state offices and EPA Region III, Philadelphia, Pennsylvania. The VSI was conducted on January 20-23, 1992 at Inco Alloys International, Inc., located in Huntington, West Virginia.

The OWM representatives, Ahmad S. Talebi, Wayne Wilson and Talal Fathallah (VSI Team), arrived at the Inco Alloy facility at approximately 8:15 a.m., to conduct VSI, on January 20, 1992. The facility's representatives were Skip Healy (Safety, Health and Environmental Engineer), Joe Barta (Health and Environmental Engineer), Mike Ansell (Safety, Health and Environmental Engineer), Douglas Morse (Process Engineering Manager), and Harley Cremeans (Supervisor of Wastewater Treatment Plant).

The VSI kickoff meeting began at approximately 8:30 a.m. Skip Healy described the facility's past and present process operations including raw materials, process descriptions and waste materials generated. The facility representatives also responded to specific questions raised by the VSI team.

The Kickoff meeting ended at approximately 12:00 a.m. The team broke for lunch at approximately 12:15 p.m. In the afternoon, Skip Healy, Joe Barta, Mike Ansel and Harley Cremeans accompanied the VSI team on a tour of Containers Storage Areas, Acid Reclaim Storage Area and Wastewater Treatment Plant.

The VSI team and facility representatives toured the remainder of the buildings and treatment facilities on following days (Jan. 21-23, 1992). A wrap-up meeting was held on the last day of the VSI tour (Jan. 23, 1992) at approximately 11:30 a.m. to discuss the SWMUs and waste management practices identified during the inspection. The VSI team left the facility at approximately 1:15 p.m. on Jan. 23, 1992.

SOLID WASTE MANAGEMENT UNITS (SWMUs)
Inco Alloys International, Inc.
Huntington, West Virginia

TABLE 1

SWMU ID NUMBER	DESCRIPTION OF UNIT	TYPE OF WASTE MANAGED
	Container Storage Area	
SWMU - 001.	Cell No. 1	Non-Ignitable, F001, F002
	Cell No. 2	Ignitable/F002, F003, F005, D001 D005 and D007
	Cell No. 3	Toxic Solid, D005, D008, D009, F001
	Cell No. 4	Kolene Salt Bath, D007
SWMU - 002.	Baghouse Dust Storage Area (closed)	D007, D010, Hexavalent Chromium
	Acid Reclaim Pretreatment:	
SWMU - 003.	Nitric-HF Storage Tank (Closed)	pH<2, Corrosive
SWMU - 004.	Waste Holding Tank	Kolene Rinse, D007
SWMU - 005.	Spent Acid Storage Tank System	D007, Hexavalent Chromium
SWMU - 006.	Neutralization Tank	D007, Hexavalent Chromium
SWMU - 007.	Old West Tailing Pond Area (Closed)	Solid Waste
SWMU - 008.	Old Lagoon No. 1 (Closed)	Solid Waste
SWMU - 009.	Old Lagoon No. 2 (Closed)	Solid Waste
SWMU - 010.	Old Lagoon No. 3 (Closed)	Solid Waste

SOLID WASTE MANAGEMENT UNITS (SWMUs)
Inco Alloys International, Inc.
Huntington, West Virginia

TABLE 1 (Continued)

SWMU ID NUMBER	DESCRIPTION OF UNIT	TYPE OF WASTE MANAGED
SWMU - 011.	Landfill (Closed)	Solid Waste
SWMU - 012.	Waste Pile (Closed)	Non-Hazardous Solid Waste, Unspecified
SWMU - 013.	Sulfuric Acid Spill Area	Sulfuric Acid
SWMU - 014.	Multihearth Roasting Furnace Area	Contamination by Hex. Chromium Spill
SWMU - 015.	Barium Chloride Area (Closed)	Barium Chloride Salts
SWMU - 016.	Existing West Tailing Pond	Non-Hazardous Solid Waste Sludge from WWTP

NOTE: SWMU = Solid Waste Management Unit

SOLID WASTE MANAGEMENT UNITS (SWMUs)
Inco Alloys International, Inc.
Huntington, West Virginia

TABLE 1 (Continued)

AOC ID NUMBER	DESCRIPTION OF UNIT	TYPE OF WASTE MANAGED
	Acid Reclaim Pretreatment:	
AOC - 1.	Dewatering Filter Press	D007, Hexavalent Chromium
AOC - 2.	Reslurry Tank	D007, Hexavalent Chromium
AOC - 3.	Multi-Hearth Furnace Area	D007, Hexavalent Chromium
	Liquid Waste Pretreatment Tank	
AOC - 4.	Equalization Tank	D007, Hexavalent Chromium
	Pickling Rinsewater Pretreatment Plant	
AOC - 5.	Equalization Tank	D007, Hexavalent Chromium
AOC - 6.	Reaction Tank	D007, Hexavalent Chromium
AOC - 7.	Clarifier	D007, Hexavalent Chromium
AOC - 8.	Sludge Dewatering Tank	D007, Hexavalent Chromium
AOC - 9.	Sludge Dewatering Tank	D007, Hexavalent Chromium
AOC - 10.	Sludge Dewatering Tank	D007, Hexavalent Chromium
	Satellite Drums Storage Areas	
AOC - 11.	Metal Reclaim Primary Mill Hot Reverting Mill Melt Shop Chipping Shop Primary Mill Chipping Mill Strip Mill Primary Mill Headquarters	

SOLID WASTE MANAGEMENT UNITS (SWMUs)
Inco Alloys International, Inc.
Huntington, West Virginia

TABLE 1 (Continued)

AOC ID NUMBER	DESCRIPTION OF UNIT	TYPE OF WASTE MANAGED
AOC - 11. (continued)	Cold Draw Area	
	Cold Draw Area	
	Cold Draw Area	
	Cold Draw Area	
	Wastewater Treatment Plant	
	Shipping Area	
	Scale Area	
	Underground Storage Tanks:	
AOC - 12.	3000 gallon UST (Closed)	Methonal
AOC - 13.	10000 gallong UST (Closed)	Hydrolic Oil
AOC - 14.	Sludge Holding Tank	W.W.T.P.'s Sludge
AOC - 15.	Temp. Sludge Holding Tank	W.W.T.P.'s Sludge
AOC - 16.	Trash Dumpster	Hydraulic Oil
AOC - 17.	Hydraulic Oil Recycling	Hydraulic Oil Soluable
	Final Pretreatment Plant	
AOC - 18.	Existing Tailing Pond	Pot lining/Non-Hazardous
	Equalization Tank (U1)	D007, Hexavalent Chromium
	Reaction Tank	D007, Hexavalent Chromium
	Reaction Tank	D007, Hexavalent Chromium
	Clarifier	D007, Hexavalent Chromium
	Sludge Holding Tank	D007, Hexavalent Chromium
	Dewatering Filter Press	D007, Hexavalent Chromium

NOTE: AOC = Area of Concern

II. HISTORY OF OWNERSHIP AND LAND USE

Facility description

Inco Alloys International, Inc. (INCO), formerly known as Huntington Inco, is located in Cabell County in Huntington, West Virginia.

Inco, Huntington plant, began operations in the fall of 1922. This 140 acre site was an undeveloped rural area. In October 1984, the facility changed its name to the Inco Alloys International Company (Reference 5). The general facility layout is shown in (Figure 1).

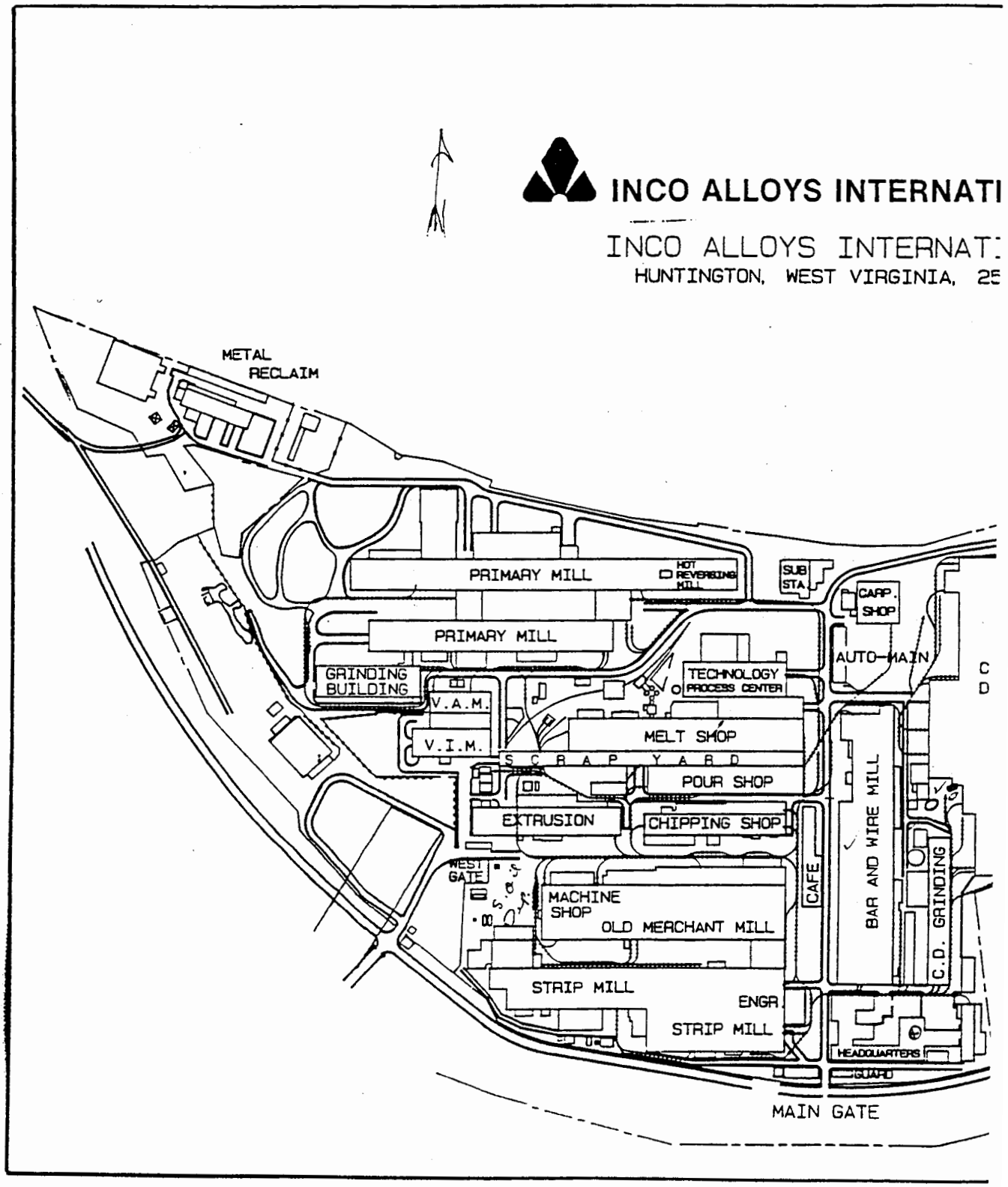
Entry to the facility is controlled by a seven foot high chain link fence that surrounds the property and controlled entry is maintained by security at the main office building which is centrally located. The Huntington flood wall surrounds portion of facility at the southwest area. Paved roads and mini rails access the other departments and buildings through out the facility.

The Guyodotte River, which flows to the Ohio River westward, is situated south of the facility. Sanitary and drinking water for plant usage is supplied by the West Virginia- American Water Supply Company.

Operation and Process Description

Inco's facility at Huntington, West Virginia is the largest rolling mill in the world devoted exclusively to the production of wrought nickel and high nickel alloys. The Huntington plant is located on approximately 140 acres with approximately 40 acres under roof. The facility produces ingots, slabs, plate, sheet, strip, billets, rods, wire, pipe and tubing in approximately 120 different alloys. Approximately 200 manufacturing operations are incorporated which include:

1. Melting of metals to produce alloy ingots
2. Hot and cold rolling
3. Extruding
4. Forging and drawing to form the various shapes
5. Heat treating to aid processing and improve physical properties
6. Machining
7. Grinding
8. Shot-blasting and Pickling to remove surface oxides and defects



Figure

AN OVERVIEW OF INCO ALLOYS, INTEF

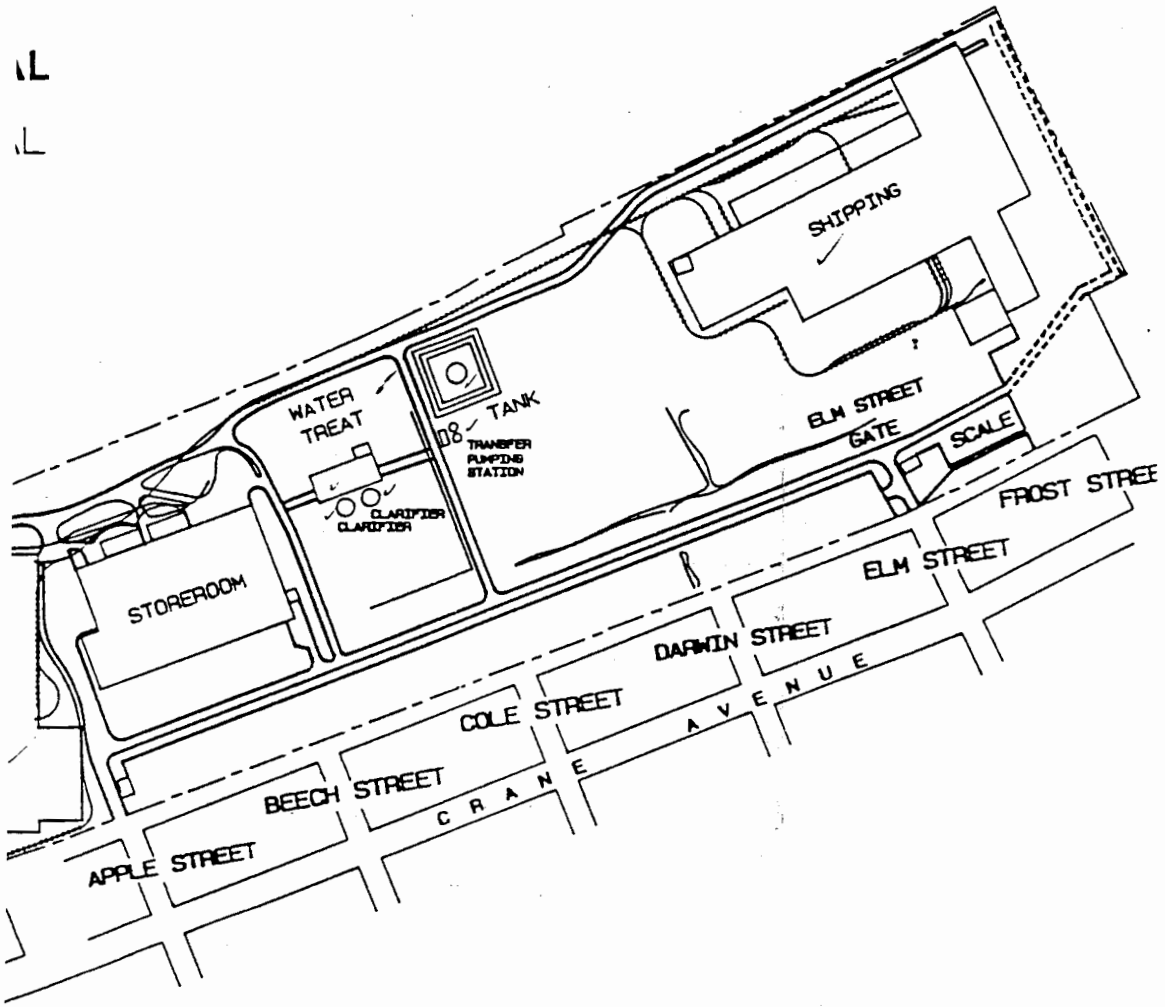
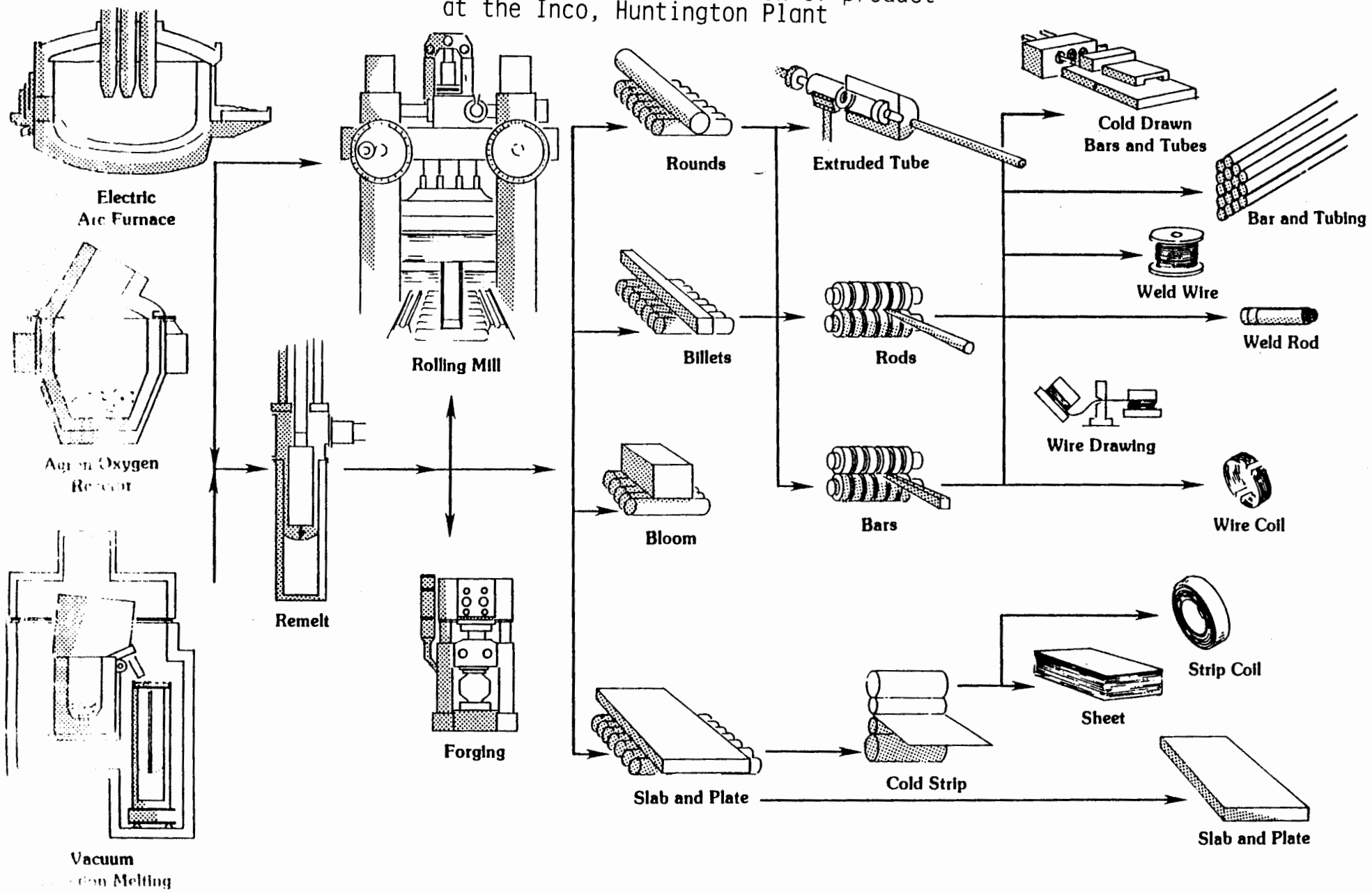


Figure - 1

AN OVERVIEW OF INCO ALLOYS,
INTERNATIONAL - HUNTINGTON PLANT

IONAL - HUNTINGTON PLANT

Figure 2
A schematic showing the basic flow of product
at the Inco, Huntington Plant



9. Electroplating to aid tube reducing and drawing operations

10. Flux-Coating of welding wire and rods

11. Ancillary operations for recovery of metallic from in-house waste by-products

Figure 1 is an overview of the plant which locates the various departments. A schematic showing the basic flow of product through the plant is shown in Figure 2. Note that the extrusion operation is performed at the Burnaugh, Kentucky facility and the finishing steps of the welding wire and rod production are performed at the Newton, North Carolina facility. INCO has historically used SIC Code 3356 to describe their operation. (Reference 16)

Melting, Casting, Breakdown Forging and Hot Rolling

The melting, casting, breakdown forging and hot rolling operations used at Huntington are diagrammed in Figure 3 (Reference 16). Nickel pellets or electro nickel from the Inco Canadian refinery are melted with alloying metals and scrap generated on-site and cast into ingots, which may be followed by remelting. Ingots cast at Huntington and some of those cast at the Burnaugh, Kentucky plant are prepared for further working by breakdown forging and/or rolling.

Primary Mill

Some ingots are forged into rounds in a hydraulic press. The forged rounds as well as ingots that have not been forged may be ground and then cut into a finished product. Other pieces are heated in a furnace and hot rolled on a large breakdown mill which can be operated in a 2-high or 4-high configuration. Hot rolled slabs can be further processed by a hot reversing strip mill (Stekle Mill) which converts the slabs into hot bands for cold rolling. Hot rolled rod, billets, plate, and strip are cut, sawed or coiled (when appropriate). Hot rolled plate is heat-treated and either air cooled or, infrequently, cooled in a water quench. The plate may be cut with a lubricant-cooled abrasive saw, sheared (dry operation) or cut with a plasma torch. Additional operations located in this building are ultrasonic plate testing, dye penetrant testing, and roll grinding.

Hot rolled rod and billets are further formed in the Bar and Wire mill, while hot-rolled strip is further formed in the Strip Mill. Billets are sawed to size, trepanned (a solid plug is bored from the center of the billet) and sent to the Burnaugh plant for extrusion into tubing (Reference 16).

Strip Mill

Sheet or strip hot rolled in the Primary Mill is further processed in the Strip Mill (figure 4). Strip (coil) passes through the continuous anneal and pickle (CAP) line. The first stage of the line is an annealing furnace followed by a spray quench. This is followed by a molten salt bath and rinse, shot-blasting to remove scale loosened by the molten salt treatment, acid pickle and final rinse. A wet scrubber is located on the shot blaster to remove particulates. Various states of the CAP line can be by-passed if not required for a particular product. After passing through the CAP line, the coil is cut from the continuous strip and sent to one of two cold rolling mills: the MKW mill or the Armco (United) mill. Cold-rolled strip passes

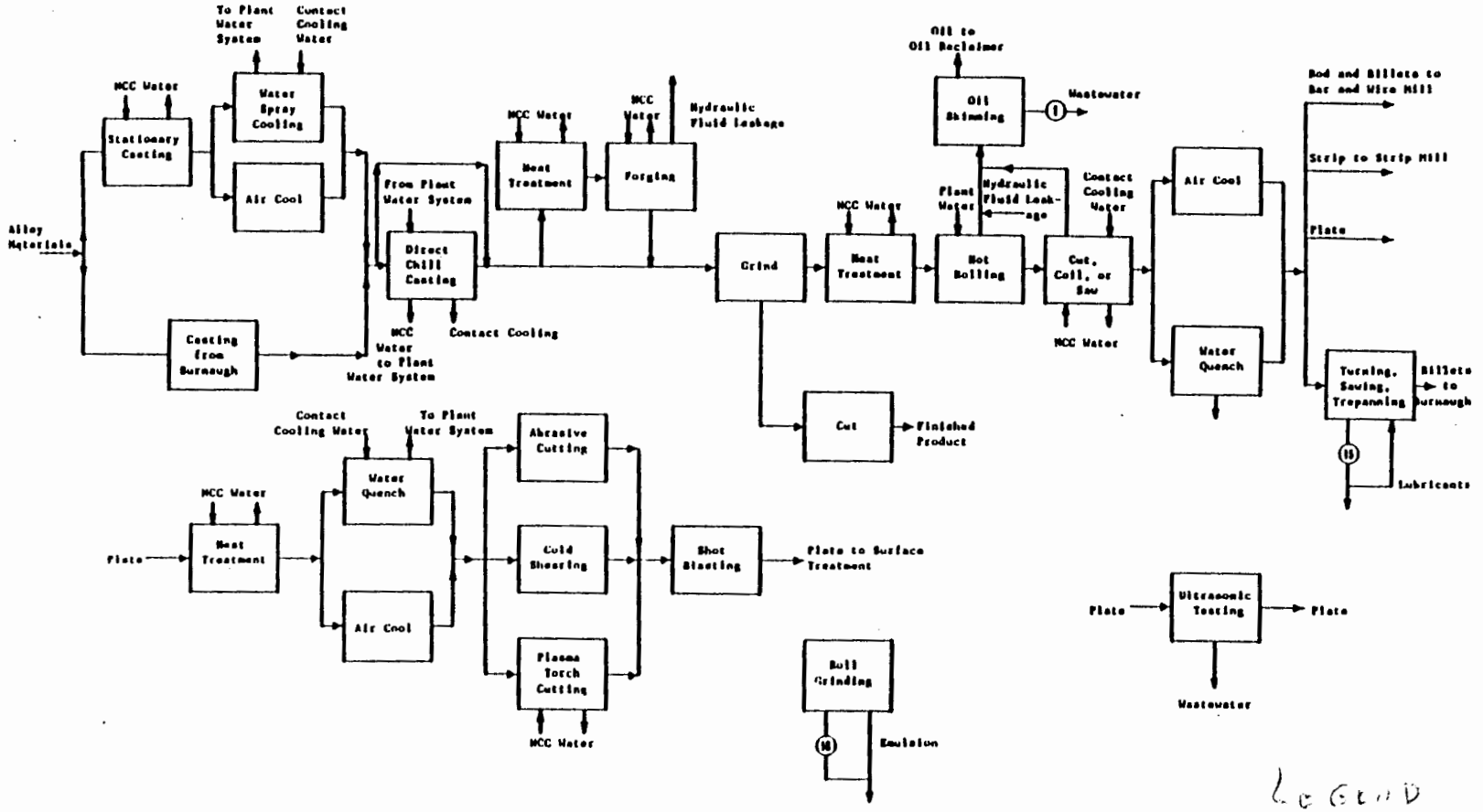


Figure 3

MELTING AND PRIMARY MILL
(CASTING, FORGING, BREAKDOWN ROLLING)

Process Diagram for Inco, Huntington Plant

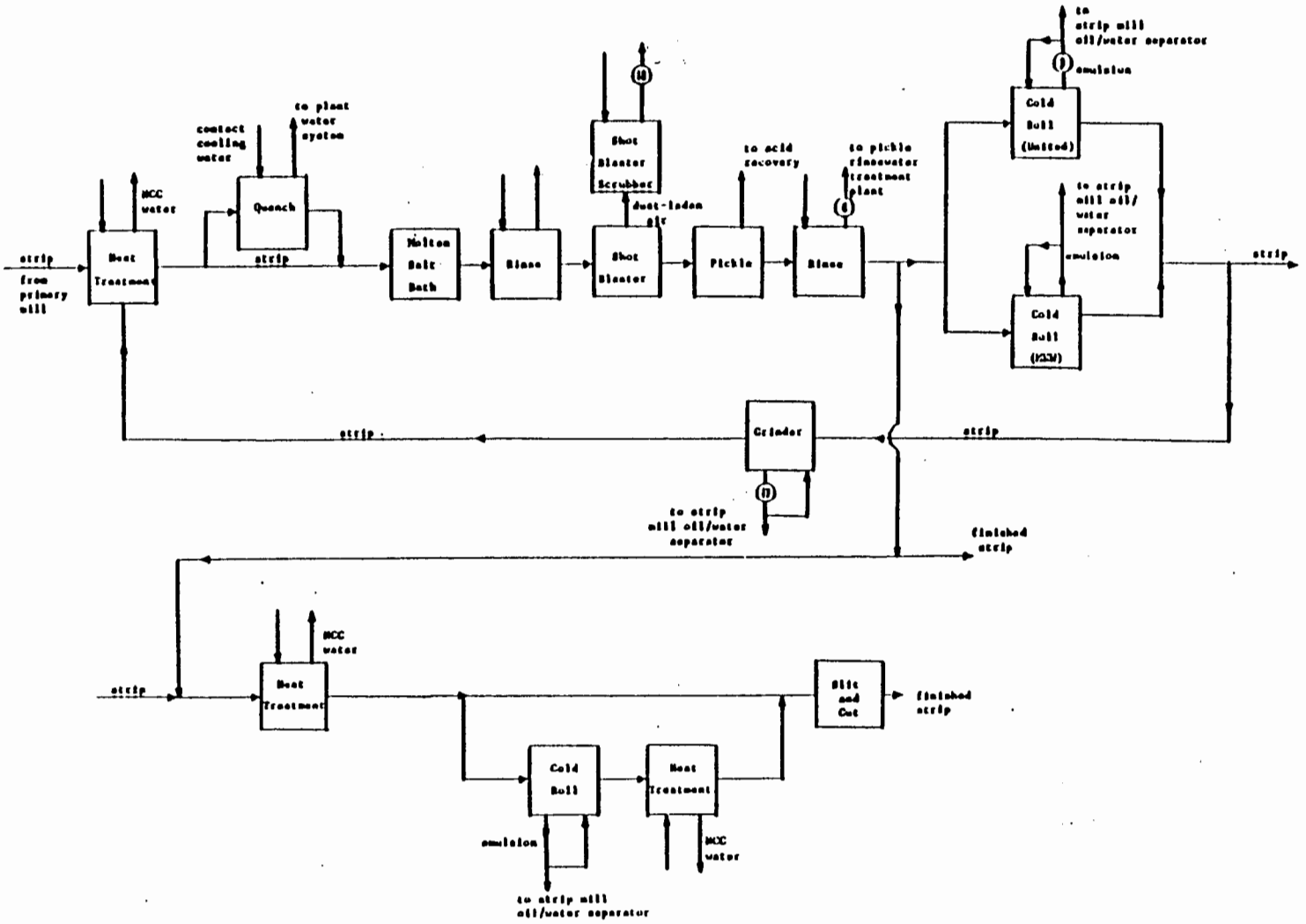


Figure 4

STRIP MILL

Process diagram for Inco, Huntington Plant

through a continuous strip grinding operation and again through the CAP line. The metal is heat treated between passes through the cold rolling mills in annealing furnaces. There may be several iterations of this sequence, depending on the desired final gauge of the strip. (Reference 16)

Bar and Wire Mill

Billets and rods hot rolled in the Primary Mill are further processed in the Bar and Wire Mill (Figure 5). This mill consists of a roughing mill and a series of tandem mills for the production of wire or rod. A billet or rod from the Primary Mill is heated in a furnace then reduced to the desired gauge by sequentially passing it through these mills. Rod may be formed in the Cold Draw area and wire may be routed to our welding products facility in Newton, North Carolina. (Reference 16)

Cold Draw

Operations performed in the Cold Draw area are diagrammed in Figures 6 (Forming Operations), Figure 7 (West Pickle House - Product and Water Flow), and Figure 8 (East Pickle House). Both rod and tubing are processed in cold drawing operations. (Reference 16)

Wastewater Treatment System

The wastewater treatment system at Inco's Huntington Plant consists of five (5) pre-treatment plants as follows:

1. Soluable waste oil pre-treatment
2. Pickle rinsewater pre-treatment
3. Acid Reclaim pre-treatment
4. Liquidwaste pre-treatment
5. Final wastewater treatment plant

As shown in Figure 19, Drawing Number D-26320, characteristic hazardous waste is treated in all pretreatment plants except soluable waste oil. (Reference 17)

A description of the aforementioned pretreatments follow:

East and West Pickle Houses

The West Pickle House (Figure 7) contains chemical baths used to surface treat tubing from the Burnaugh facility, wire and rod from the Bar and Wire mill, tubing and rod formed in the Cold Draw area, and plate from the Primary Mill. As diagrammed in Figure 7, surface treatment may occur in many sequences, depending on the product treated. Products are conveyed from bath to bath by an overhead crane. In general, a hot formed product is first soaked in molten salt then plunged into a rinse tank. The molten salt treatment is followed by pickling in one of several acid solutions, the type of acid depending on the alloy being treated. Tubing or rod which is subsequently to be drawn may be dipped into a borate coating solution. The West Pickle House also contains a detergent bath used to remove oily or greasy lubricants from formed products. (Reference 1, 16, and 17)

The East Pickle House of the Cold Draw area (Figure 8) is used to surface treat long tubes. All of the tanks in this area are 90 feet long. The tubes are moved from bath to bath by an overhead crane. There is no molten salt

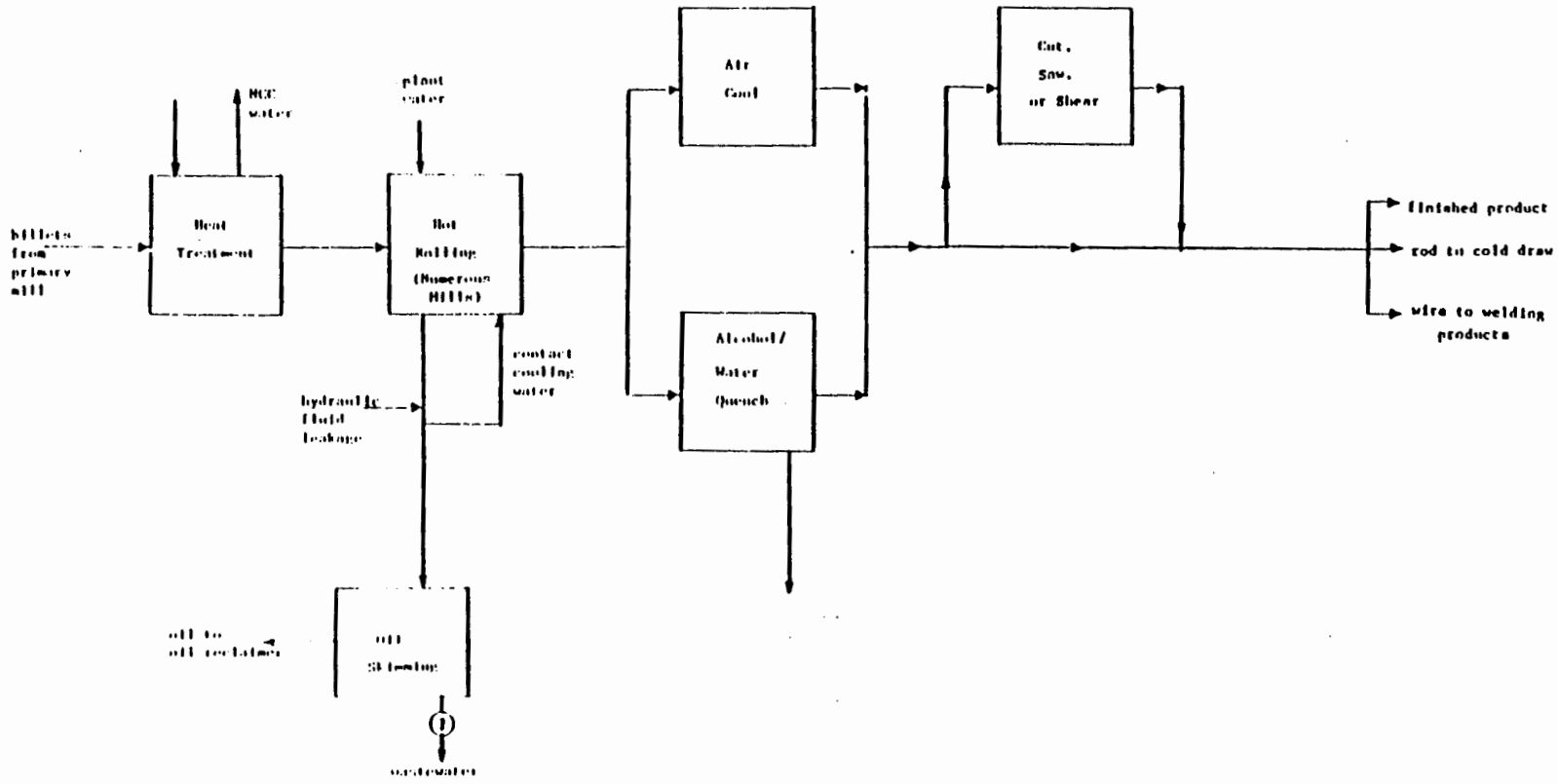


Figure 5

BAR AND WIRE MILL

Process diagram for Inco, Huntington Plant

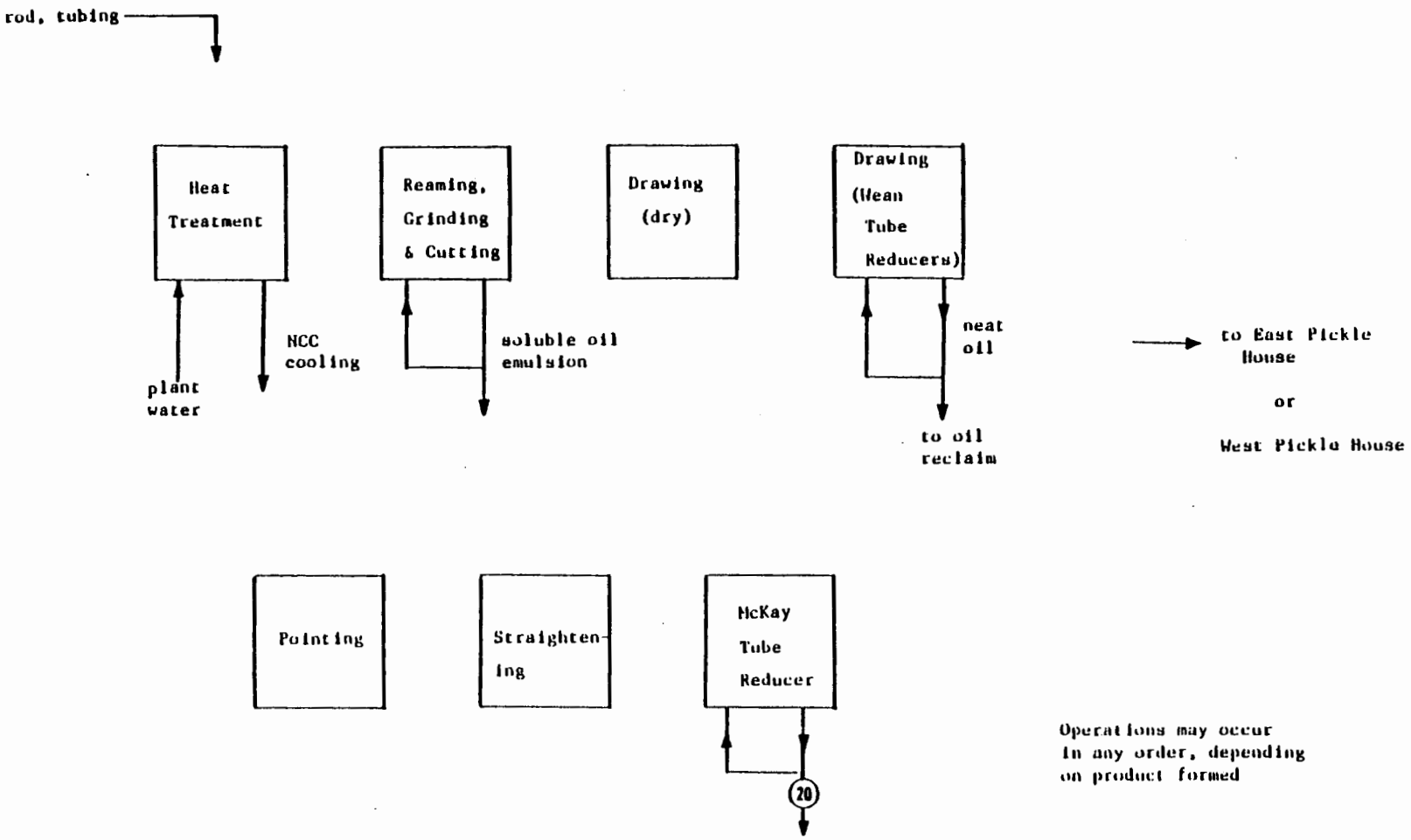


Figure 6

COLD DRAW FORMING OPERATIONS

Process diagram for Inco, Huntington Plant

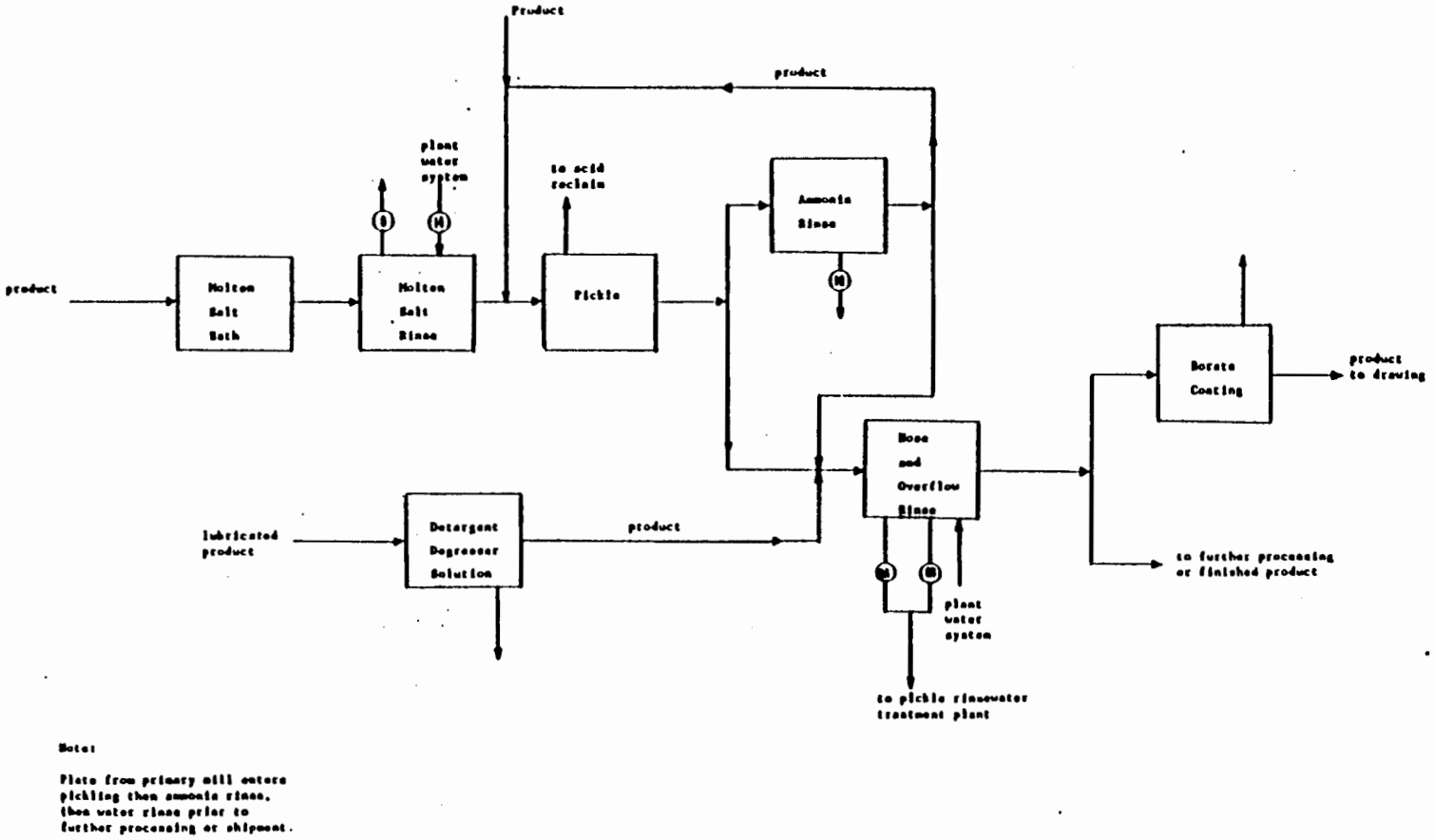


Figure 7

COLD DRAW WEST PICKLE HOUSE - PRODUCT AND WATER FLOW

Diagram for Inco, Huntington Plant

bath in the East Pickle House, but a caustic/permanganate bath, maintained at 80° C, serves a similar function. The East Pickle House also contains nitric and sulfuric acid pickling baths, a borate coating bath and an oxalate bath. The oxalate bath is used to precoat tubes prior to pointing the ends for drawing. Detergent cleaning operations used to degrease long tubes are located on the floor of the cold draw area. These operations consist of a hot detergent bath followed by a hot water rinse. The over flow and generated wastewater are routed to the wastewater treatment plant via sewer lines. (Reference 16 and 17

Acid Reclaim Area

Nickel and copper are recovered from spent pickling acids and the sludges generated from the treatment of pickling rinsewater by the process shown in Figure 9. The first stage of this process is a wastewater treatment facility which began operation in 1928. In the first stage, spent pickling acids and the sludge generated from pickle rinsewater treatment at the Burnaugh plant are trucked to Huntington. These materials are combined with the spent acids treatment sludges generated at the Huntington plant in the Spent Acid Holding Tank, which is an acid-brick lined tank. The sludges are dissolved in the acid and then mixed with soda ash. As the pH reaches 9-10, iron, copper, trivalent chromium, and nickel precipitate from solution as hydroxides/carbonates. The mixture is pumped to a plate and frame filter where the depleted liquid is removed and the hydroxide/carbonate solids are recovered. The filter cake is then roasted in a multi-hearth furnace. During roasting, the remaining water evaporates and the metals in the filter cake are converted to nickel oxide. The recovered metals are recycled via melting (Reference 1, 16, and 17).

Slag Reclamation

The process used to recover nickel values from furnace slag is shown in Figure 10. Fluxing agents are added to molten nickel to remove oxidized metals and other impurities from the melt. The impurities rise to the surface of the liquid metal and are removed from the furnace. This slag or dross is approximately 10 percent metallic. The first step in separating nickel from the cooled, solidified slag is to pick out large pieces of metal by hand. Then, the slag is mechanically granulated with a jaw crusher and a wet rod mill. The finely ground slag and water slurry are discharged from the road mill through a trommel screen which removes large metal particles. The slurry is then fed onto a mineral jig which used pulsing water to suspend the light slag and allow the metal to settle out. The metal separated from the slag in each step is returned to the Melt Shop. The waste water, carrying the lighter solid material is discharged to a taling pond, where the solids rapidly settle out. The pond overflows to our Wastewater Treatment Plant. The sludge (tailings) is periodically dredged from the tailings pond and trucked to a solid waste landfill (City of Huntington's Landfill). (Reference 16 and 18)

Wastewater Treatment Plant

The wastewater treatment plant (WWTP), which began operations in August, 1988, received contact cooling water, pickle rinse water pretreatment plant effluent, and other process wastewaters. At the WWTP, the wastewater is equalized, treated in Unipure reactors to precipitate metallics, clarified, and the sludge filtered through sludge directly into a dump trailer located under the press. When the dump trailer is full, the sludge is transferred to

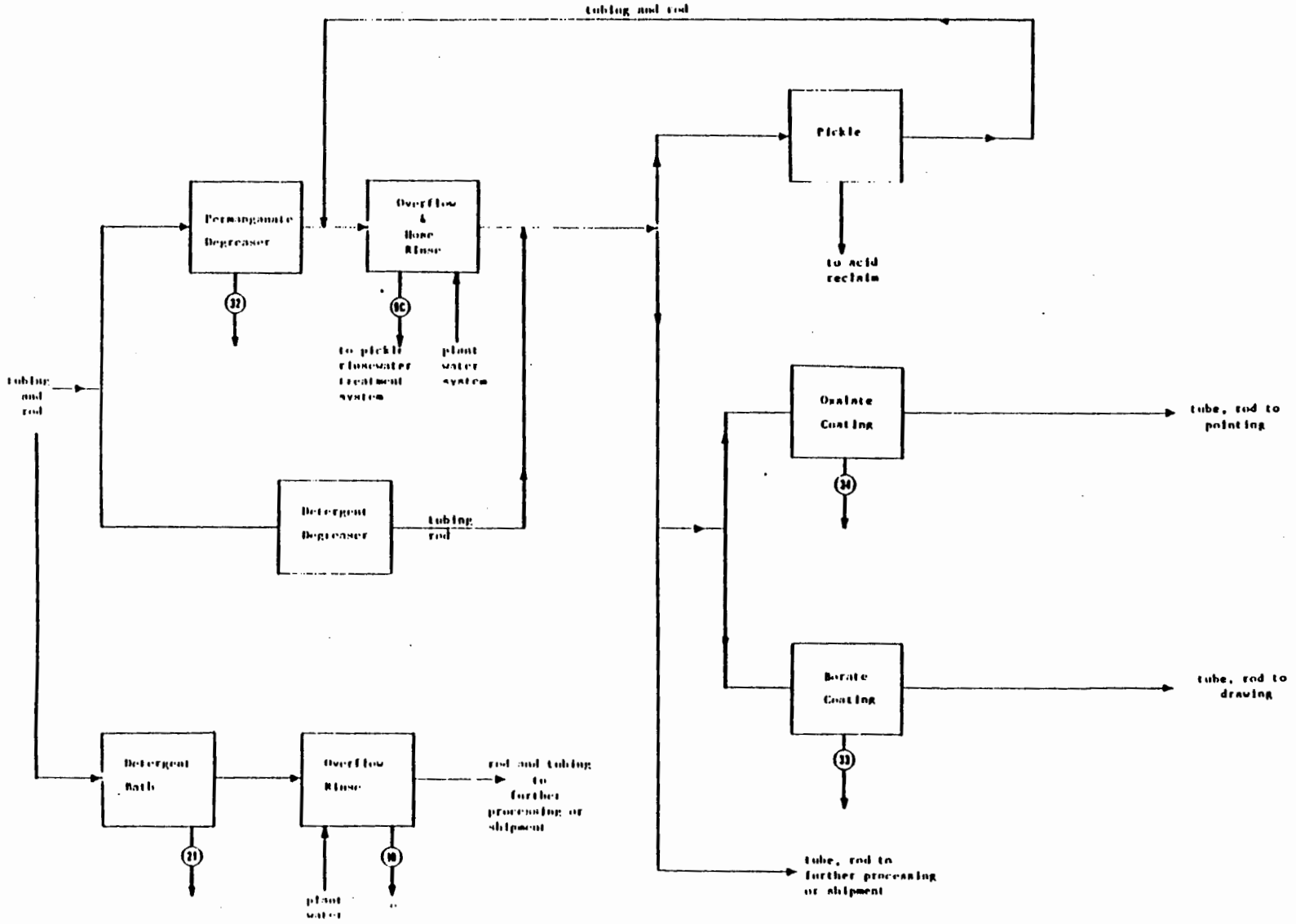


Figure 8

COLD DRAW EAST PICKLE HOUSE AND DETERGENT CLEANERS

Process and water flow diagram for Inco, Huntington Plant

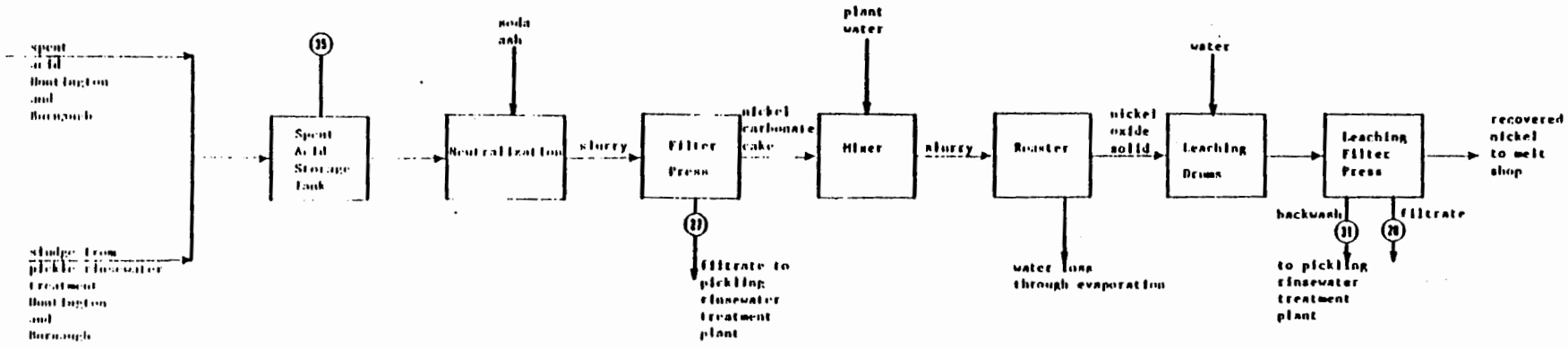


Figure 9

ACID RECLAIM

Process diagram for Inco, Huntington Plant

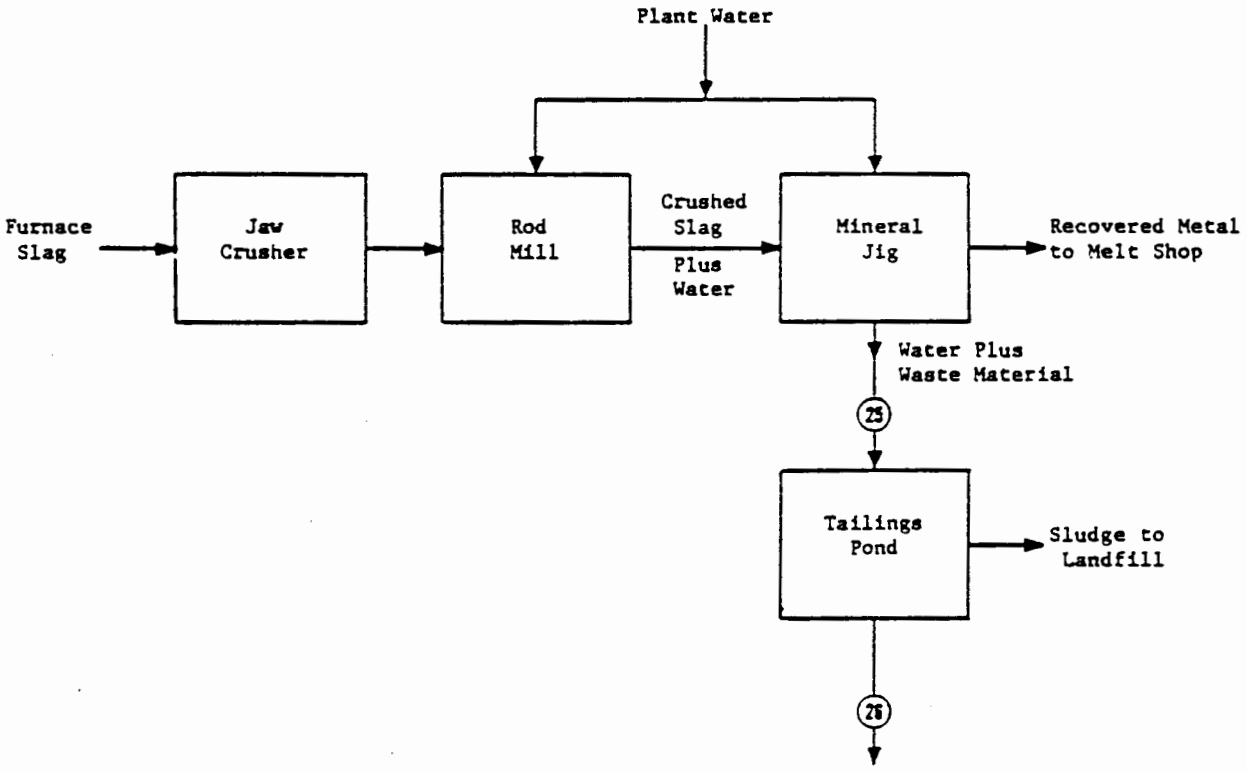


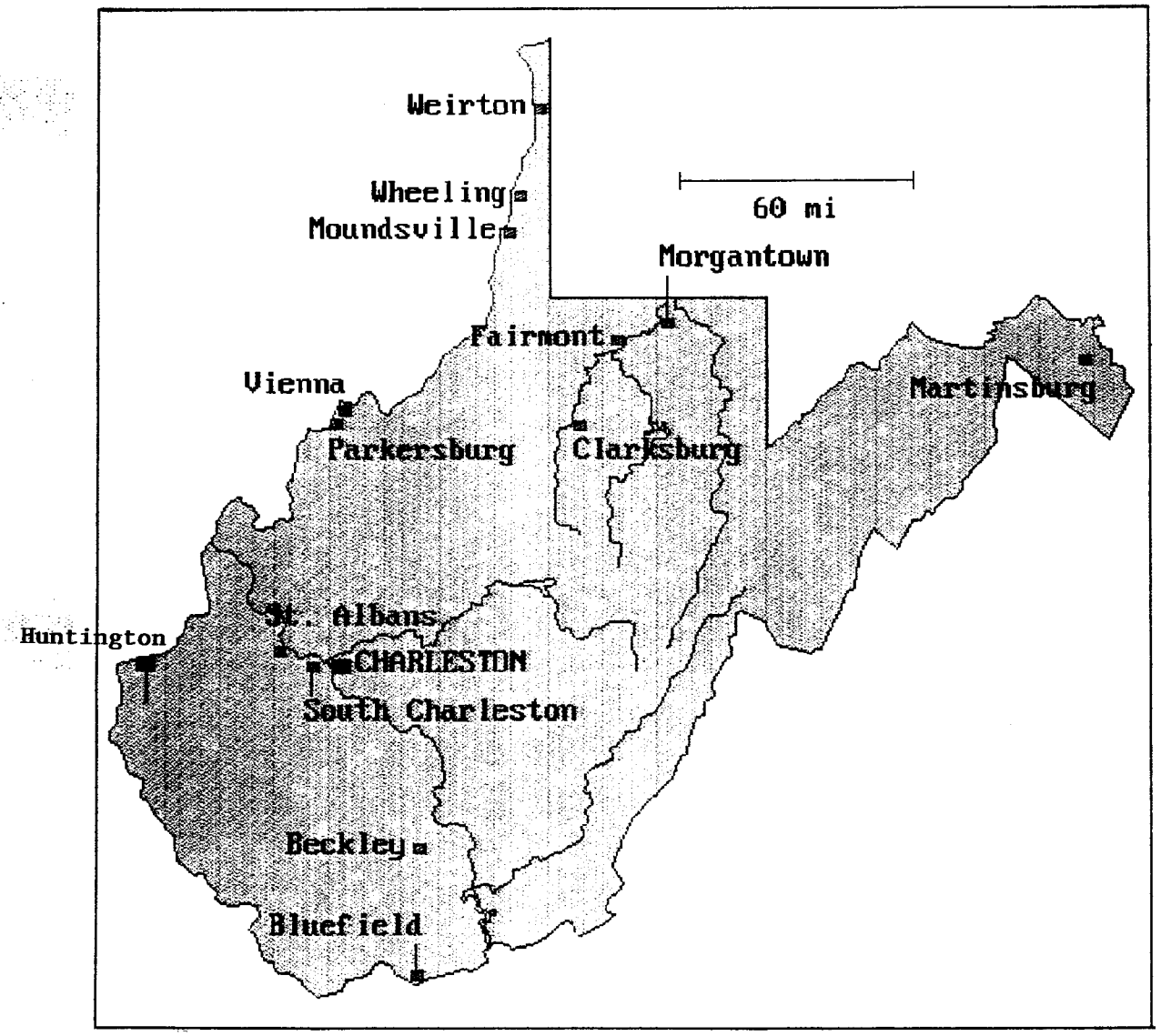
Figure 10

SLAG RECLAMATION

Process diagram for Inco, Huntington Plant

Figure - 11

Map of Major Cities of West Virginia



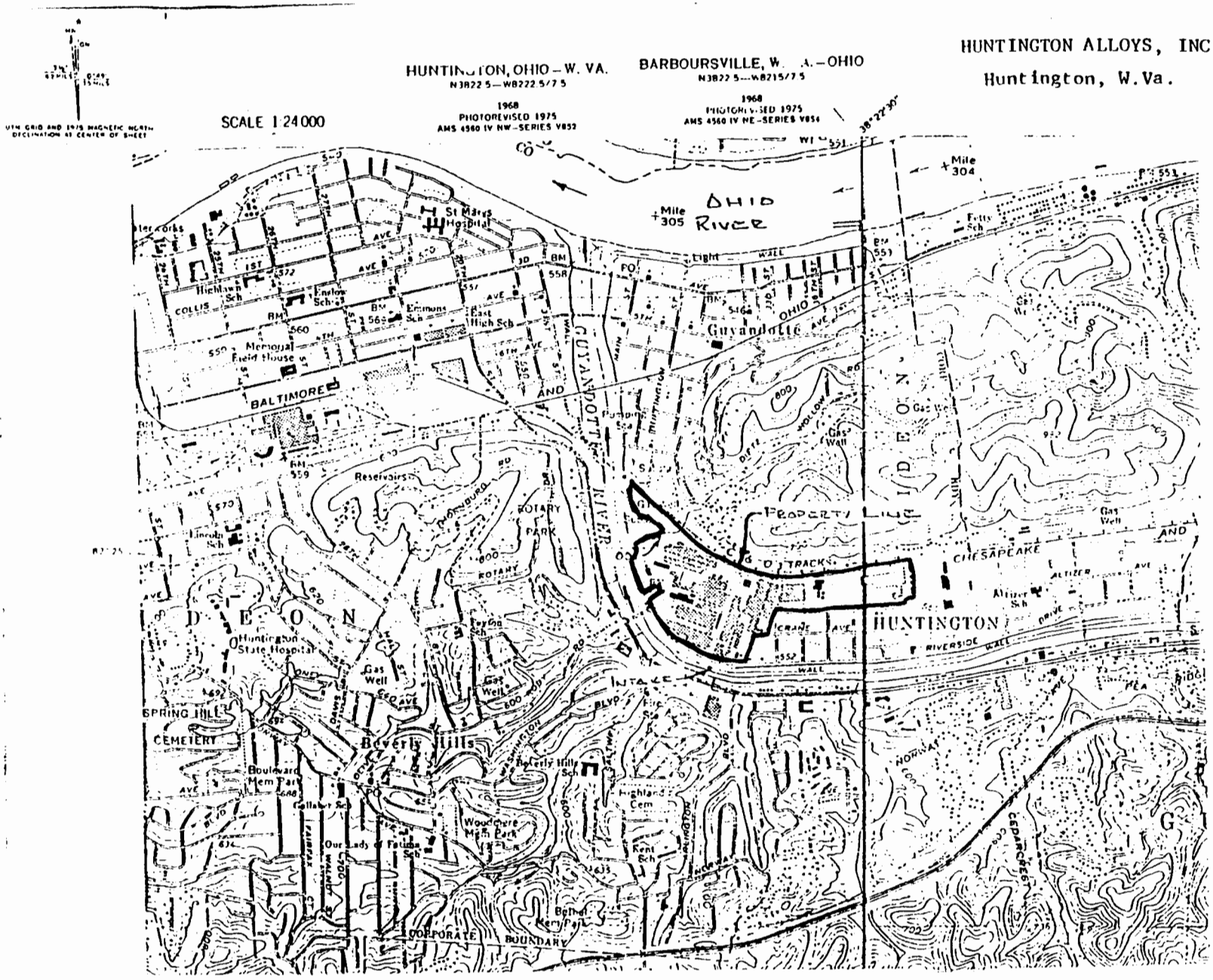


Figure - 12

Topographical map of Inco Alloys International, Inc. - Huntington Plant

the Temporary Tailings Storage Area at the north end of the plant (Figure 1). From the temporary storage area, the WWTP sludge is transferred to the City of Huntington's Deitz Hollow landfill where it is deposited in the segregated tailings area of the landfill.

Initial EP Toxicity tests performed on the WWTP sludge in late 1988, indicated the sludge to be a non-hazardous waste. The City of Huntginton and the Waste Management Section granted permission to dispose of the WWTP sludge at the Deitz Hollow landfill. (Reference 16, 17, and 18)

III. ENVIRONMENTAL SETTING

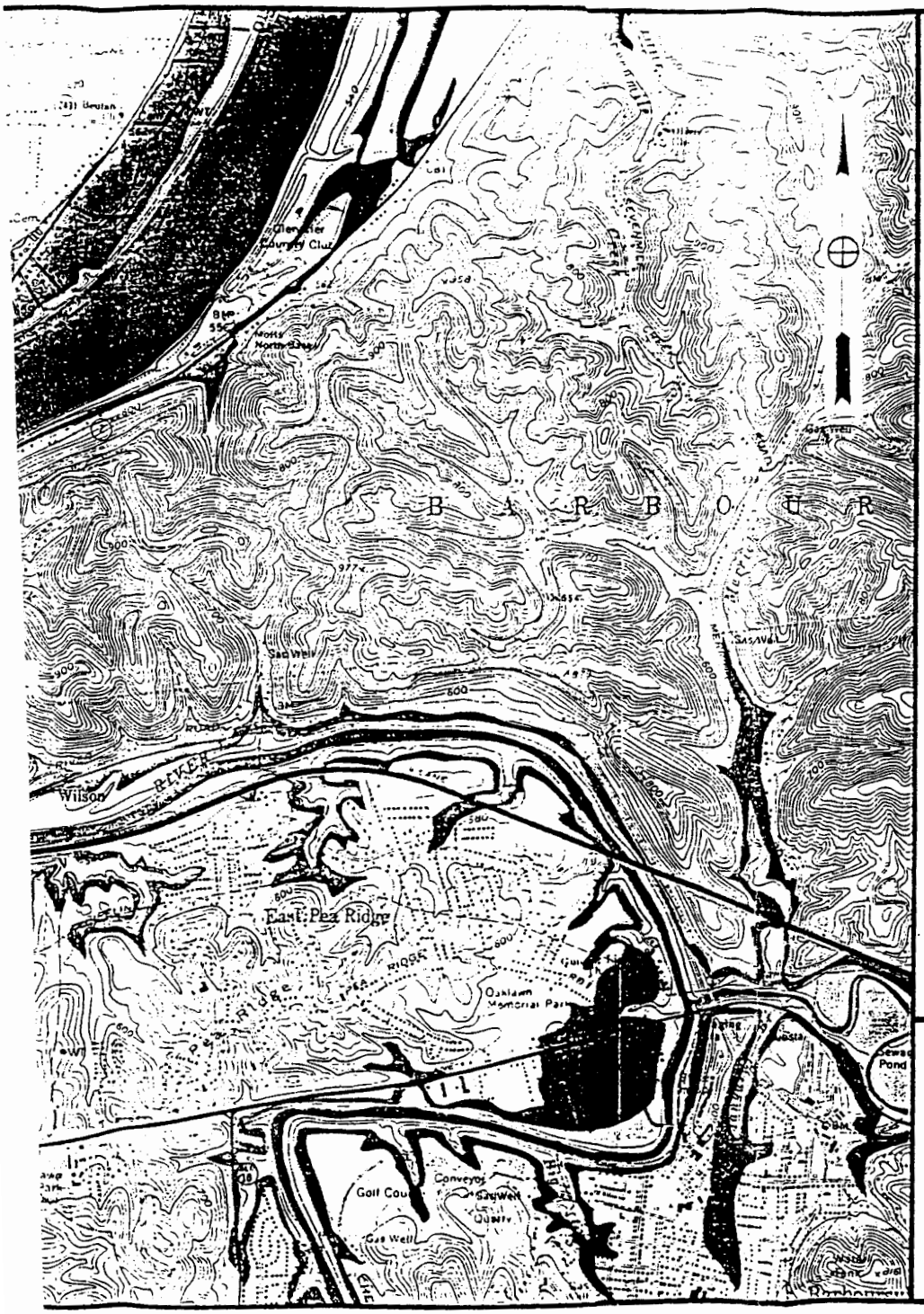
Location and Surrounding Land Use

Inco is located on the north bank of the Guyandotte River approximately one mile south of the Ohio River. The plant is located partly within the corporate limits of the city of Huntington, Cabell County, West Virginia. The geographical coordinates of the facility are 38° 20' 00" North latitude and 82° 33' 00" West longitude. Figure 11 shows the location of Huntington in relation to other cities within WV. Figure 12 presents a vicinity map showing the geographic location of the facility in relation to Huntington and Figure 13 presents a map of the surrounding area of the facility and flooded areas. Figure 1 presents the general overview of the INCO facility.
(Reference 01)

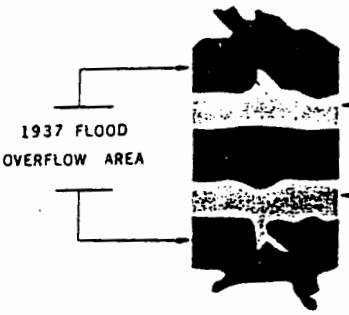
The City of Huntington is the county seat of Cabell County. The city has a population of 54,528 (1990 census) and the County has a population of 106,835 (1980 census). The principal industries leading products in the area are centered around: Glass, glassware, alloys of nickel and its products, railway and mine cars, clothing, steel rails, chemicals and shoes. There is limited agriculture in the county with the chief agricultural products consisting of lumber, tobacco, dairy, fruit, poultry and sorghum. The closest residences are less than a mile from the facility's property line and are located south-east of the facility. (Reference 1)

Cabell County is in the Central Allegheny Plateau Major Land Resource Area. The county is marked by hills and narrow valleys. The northern section has gently sloping to moderately steep, rounded ridgetops. The side slopes vary from moderately steep to very steep. The central and southern parts of the county are dominated by narrow ridgetops and steep or very steep side slopes that are broken in many areas by less sloping benches.
The valleys of the Guyandotte River, the Mud River, and the Ohio River are dominated by nearly level to gently sloping soils. The ancient Teays River Valley extends through the central part of the county from Culloden to Huntington and consists mainly of gently sloping and strongly sloping soils. The county is drained primarily by the Guyan Creek, the Guyandotte River, the Mud River and the Ohio River.

Elevation in the county ranges from 1,169 feet above sea level on a ridgetop near the Wayne County line in the southern part of the county to 515 feet above sea level at normal pool elevation on the Ohio River.



LEGEND



MILE + 305 — RIVER MILES BELOW PITTSBURGH

——— FLOODWALLS AND LEVEES: NOW PROVIDE PROTECTION FROM FLOODS AS HIGH AS THE JANUARY 1937 FLOOD

2000 0 2000 4000

SCALE IN FEET

NOTES

Base map taken from U.S. Geological Survey topographic maps.

Only backwater flooding from the Ohio River is shown on tributary streams.

The actual limits of the overflow area on the ground may vary somewhat from that shown on the map because the contour interval and scale of the map do not permit precise plotting of the flooded area boundaries.

Elevations shown are based on Mean Sea Level Datum of 1929.

Contour interval is 20 feet.
Dotted lines represent 10 foot contour intervals.

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT CORPS OF ENGINEERS
HUNTINGTON, WEST VIRGINIA

FLOODED AREAS

OHIO RIVER
CABELL COUNTY AND WAYNE COUNTY, WEST VIRGINIA
MILE 300.5 TO MILE 305.4
SHEET 66 OF OHIO RIVER SERIES

PLATE 8

he Inco, Huntington Plant

Figure - 13

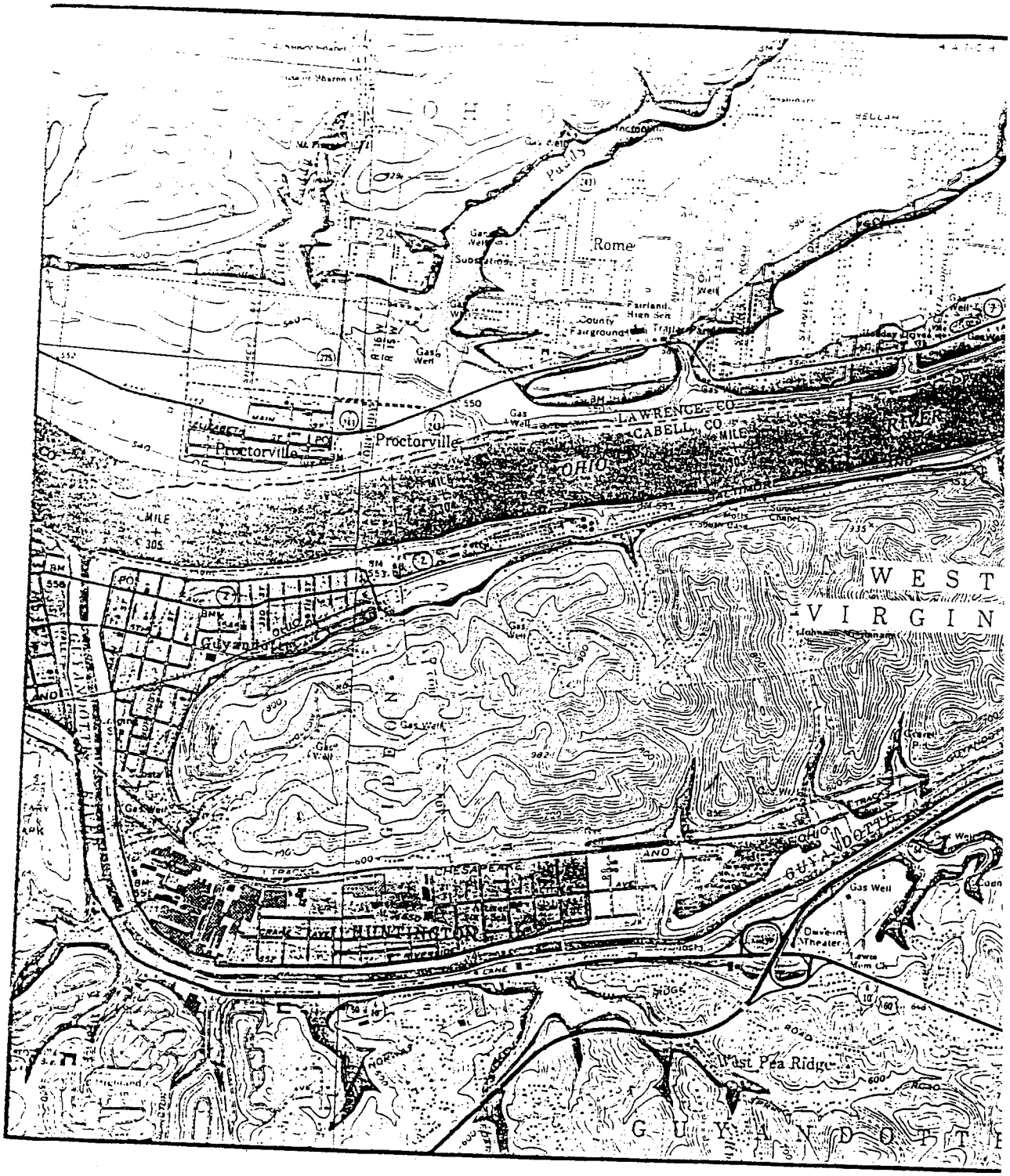


Figure - 1:

Surrounding Area and flooded Area (

Climate and Meteorology

Huntington experiences a continental climate, with well defined seasons consisting of hot and humid summers, cool to cold winters and windy and changeable springs and falls. Average temperatures range from a daily mean maximum of 86° Fahrenheit (F) in July to a daily mean minimum of 32° F in January. (Reference 1)

Annual precipitation is fairly well distributed throughout the year. The average annual precipitation is 41 inches, with an average of 25.6 inches of snowfall each winter. Greatest average monthly precipitation occurs in July but no average monthly precipitation is less than 2.5 inches. Snow has fallen as early as October and as late as May in the area. (Reference 20)

Flood Control/Drainage Barriers

The entire INCO-Huntington facility (with the exception of one parking area) is protected from flooding by the Guyandotte and Ohio River by the city of Huntington's Floodwall System (Figure 13). A description of this system as received from the Huntington Flood Wall Board is attached. As stated in this description, the flood wall project was "...designed to provide protection to the entire city from the Ohio River floods three feet higher than...the maximum flood on record. (Reference 1)

The Guyandotte River and a small pond are the only surface waters in the vicinity of the facility. These waters are identified in Figure 13.

Floodplain Standard

The sources of flood plain information used in developing Figure 13 are from the Department of the Army, Huntington District Corps of Engineers, the City of Huntington, Department of Public Works, and the U.S. Department of the Interior-Geological Survey. Copies of two (2) flood plain maps are included. Figure 13, Federal Insurance Administration, December, 1980 and Figure 13 is a copy of a map published by the Department of the Army, Huntington District Corps of Engineers in the book titled, "Flood Plain Information" - Ohio River, May, 1973. (Reference 1)

Karst Terrain Standard

This facility does not have the underlying geology known as Karst Terrain as can be documented by the article by W. K. Jones "Karst Hydrology in West Virginia" as published in the "Proceeding of the 4th Conference on Karst Geology and Hydrology" in the "West Virginia Geologic and Economic Survey", 1974.

Critical Recharge Standard

The only public water supply within several miles of this facility is the Huntington Water Corporation, which derives its water from the Ohio River upstream from Huntington Alloys' facility.

Because this facility is located on the banks of the Guyandotte River, the normal groundwater flow is towards the river thus preventing this area from being a drinking water recharge area.

Wetlands Standard

There are no wetlands located in or around the hazardous waste storage areas.

Dam-Related Flood Standard

This facility is not located in a dam-related "danger reach" flood hazardous area.

Winds in the area are variable, but the prevailing wind directions are southwest and west southwest. Average wind speeds are less than ten miles per hour. The area does experience periodical hurricanes during the late summer and early fall and frequent thunderstorms during the summer months. (Reference 1)

Topography, Surface Drainage and Soil

The area surrounding the INCO facility has hilly and rolling topography. The facility is located on a relatively flat area at an elevation of 550 feet (msl) within the flood plain of the Guyandotte and Ohio Rivers. However, the entire INCO facility is protected from flooding by the City of Huntington's floodwall system.

Fire Control Brigades

INCO's Huntington Plant has its own internal fire brigade that responds with a Chevrolet fire pumper to all fires. This pumper is equipped with hoses, extinguishers, etc., to fight most types of industrial fires. During a response at least eleven (11) men will respond to the fire scene. Other trained firemen will respond as they are available. All parts of the plant have fire hydrants within a reasonable distance of any potential fire area. Any large fire that may require a greater response than that available within the plan, will be responded to by outside emergency services (city, county, etc.). Of the three (3) hazardous waste storage areas, only the hazardous waste container storage area (shipping center) handles flammable wastes.

Plant Sewer Systems

The plant has two sewer systems for handling wastewaters and consists of a system for sanitary and process wastes discharged to the City of Huntington sanitary sewer system and a storm sewer system in part of the west end of the plant to drain the grounds and building roofs which discharge to the Guyandotte River.

Plant Structures

All hazardous waste storage areas, production buildings, offices, change houses, non-hazardous storage areas and water/waste water treatment facilities are shown in Figure 1.

Loading and Unloading Areas

All of the three (3) permitted hazardous waste storage areas receive waste from off-site and the two (2) container storage areas load waste for transport for off-site disposal. These loading/unloading facilities identified in Figure 1 are as follows:

i. Hazardous Waste Container Storage Area - Shipping Center

The shipping center has two (2) units for loading/unloading hazardous waste. The loading docks, which are concrete and equipped with ramps for fork trucks to enter trailers, are used to load/unload 55 gallon drums. Also, concrete pad at the storage area is used for cargo tankers which pump some liquids from the storage drums for transport to off-site facilities for disposal.

ii. Spent Acid Storage Tank - Acid Reclaim

A concrete pad located immediately next to the storage tank has been used as an unloading area for cargo tankers of hazardous waste received from off-site.

iii. Baghouse Dust Storage Area - Stores Department (closed)

The storeroom loading dock, has a concrete floor and is roofed. It is equipped with ramps for trucks to enter. Trailers were used to unload 55-gallon drums of dust received from off-site and/or to load boxes and/or drums of dust for transfer off-site. The Baghouse dust storage area was closed on March 27, 1987. The area is presently used for product storage only.

OFF-SITE WASTE:

An Estimated 10% of the wastes stored at the Huntington plant are produced by INCO Alloys' Burnaugh, Kentucky plant. These off-site wastes (which at the present time consists of three (3) types of wastes) are very similar to the wastes produced at the Huntington plant and are shipped to the Huntington plant for storage prior to recycling. (Reference 1 and 17)

ON-SITE WASTE

Because of the large number of hazardous wastes produced and/or stored at the Huntington plant, it would not be practical to describe in detail each generating process. However, the waste generation processes can be collectively described as follows:

- Solvents - Wastes of this type are used plant-wide for cleaning and grease removal and as laboratory solvents in analytical work.

- Salt Bath Waste - These wastes are sludges removed from molten salt baths used for heat treating metals.

- Paint Thinners - This is similar to the solvents, but represent a special mixture of organic compounds used to thin paints.

- Baghouse Dusts - These were high metallic powders which were collected by air pollution control baghouses and which were almost exclusively recycled to recover the metals. The baghouse was closed on March 27, 1987.

- Pickling Rinse Water Treatment Plant Sludges - This material is produced as the under-flow solids from waste water treatment plants. This material is recycled to recover the contained metals.

- Welding Fluxes - These are barium containing wastes which are produced by the production of flux materials which is applied to welding rods.

- Mercury Still Bottoms - This is a slag-like material produced by a chemical laboratory in an analytical procedure which requires the distillation of mercury. This is a small process which is performed on a bench size scale in the laboratory.

IV. HAZARDOUS WASTE MANAGEMENT UNITS

INCO operates only three (3) permitted Hazardous Waste Management units. Two of these areas are for container storage (55-gallon drums) and one area is an in-ground open top tank. These areas are used to store hazardous wastes prior to recycle or disposal. The types of wastes stored are either EPA listed wastes, ignitable wastes, toxic wastes or corrosive wastes. No highly reactive or explosive wastes are stored. (Reference 4)

The Hazardous Waste Management permit was issued on June 24, 1984, to INCO Alloys, Inc. The company changed its name to INCO Alloys International, Inc., effective November 19, 1984. The following Hazardous Waste Management Units are permitted to operate for storage, treatment and/or disposal of Hazardous Waste within the Huntington plant:

1. Container Storage Area (Shipping Center)

Container Management Practices

This area is used to store a variety of wastes in 55-gallon drums and is permitted to store 1024 drums of hazardous waste. The storage area is divided into four (4) cells. Drums of hazardous waste containing free liquids (Non-Ignitable) are stored in Cell No. 1; where drums containing free liquid (Ignitable) are stored in Cell No. 2. Only toxic solid waste is stored in Cell No. 3 and drums of kolene salt bath waste and solid non-ignitable are stored in Cell No. 4, (Figure 14). The wastes are broadly classified into four (4) groups. A general description of each group is followed and a list of the wastes in each group is provided in Table 2.

Group A - Solids containing caustic materials and metals which fail the EP Toxicity test for leachate toxicity for Chromium.

Group B - Solids containing metals causing the solid to fail the EP test for leachate toxicity; the leachable metals are barium, chromium, lead, or mercury. Also, absorbent containing listed non-ignitable solvents.

Group C - Toxic liquids containing halogenated organics that are listed hazardous wastes.

Group D - Toxic and/or ignitable liquids that are listed hazardous wastes and/or meet the characteristics of ignitability or EP toxicity.

LIST OF HAZARDOUS WASTES
INCO ALLOYS INTERNATIONAL, INC.
HUNTINGTON, WV

TABLE 2

HAZARDOUS WASTE	PARAMETER	RATIONALE	POINT OF GENERATION
GROUP A			
Kolene Salt Bath Waste	EP Toxicity (Cr^{+6})	This is an EP toxic waste (D007) due to its contained hexavalent chromium.	
GROUP B			
Heat Treating Salts - Barium	EP Toxicity (B_a)	This is an EP toxic waste (D005) due to its contained barium.	
Barium-Bearing Welding Fluxes	EP Toxicity (BH_a)	This is an EP toxic waste (D005) due to its contained barium.	
Absorbent and 1,1,1 Trichloroethane	1,1,1 Trichloroethane	This is an EPA listed waste (F001) due to its contained 1,1,1 Trichloroethane.	
Mercury Still Bottoms	EP Toxicity (Pb and Hg)	This is an EP toxic waste (D008 and D009) due to its contained lead and mercury.	
GROUP C			
Used 1,1,1 Trichloroethane	1,1,1 Trichloroethane	This is an EPA (F001) due to its contained 1,1,1 Trichloroethane.	
Genetron and Oil	1,1,2 Trichloro-1,2,2 Trifluoroethane	This is an EPa listed waste (F002) due to its contained 1,1,2 Trichloro-1,2,2 Trifluoroethane.	
Used Solvent HD150	1,1,1 Trichloroethane Tetrachloroethylene Methylene Chloride Trichloroethylene	This is an EPA listed waste (F001) due to its contained 1,1,1 Trichloroethane Tetrachloroethylene, Methylene Chloride, Trichloroethylene.	

HAZARDOUS WASTE	PARAMETER	RATIONALE	POINT OF GENERATION
GROUP D			
Used Paint Thinners	Xylene, Methyl Ethyl Ketone, Toluene	This is an EPA listed waste (F003 and F005) due to its contained Xylene, Methyl Ethyl Ketone, Toulene.	
Stoddard Solvent, Used	Ignitability Flask Point $<140^{o}$	This is an EPA characteristic waste (D001) due to a flash point less than $140^{o}F$.	
Ink and Methanol Mixture	Methanol	This is an EPA listed waste (F003) due to its contained methanol.	
Mixed Laboratory Solvents	1,1,2 Trichloro-1,2,2 Trifluoroethane, Toluene	This is an EPA listed waste (F002 & F005) due to its contained 1,1,2 Trichloro-1,1,2 Trifluoroethane, Toluene.	
Melting Department Baghouse Dust	EP Toxicity (Cr^{+6}, Se)	This is an EP toxic waste (D007 & D010) due to its contained hexavalent chromium and selenium.	
B-40 Baghouse Dust	EP Toxicity (Cr^{+6})	This is an EP toxic waste (D007) due to its contained hexavalent chromium.	
Heat Treated Oil Tank Sludge	EP Toxicity (B_a)	This is an EP toxic waste (D005) due to its contained barium.	

BAGHOUSE DUST STORAGE AREA

HAZARDOUS WASTE	PARAMETER	RATIONALE	POINT OF GENERATION
Melting Department Baghouse Dust	EP Toxicity (Cr^{+6}, Se)	This is an EP toxic waste (D007 & D010) due to its contained hexavalent chromium and selenium.	
B-40 Baghouse Dust	EP Toxicity (Cr^{+6})	This is an EP toxic waste (D007) due to its contained hexavalent chromium.	

NOTE: Baghouse Dust Storage Area was closed on ..... The Closure was certified by independent engineers, however, the state has never approved the closure.

SPENT ACID STORAGE AREA

HAZARDOUS WASTE	PARAMETER	RATIONALE	POINT OF GENERATION
Pickling Rinsewater Pretreatment Plant Sludge	EP Toxicity (Cr^{+6})	This is an EP toxic waste (D007) due to its contained hexavalent chromium.	
Acid Reclaim Furnace Dust	EP Toxicity	This is an EP toxic waste (D007) due to its contained hexavalent chromium.	
Pickling Rinsewater Treatment Plant Sludge & Spent Acid Mixture	Corrosive material (pH <2.0) EP_{+6} Toxicity (Cr^{+6})	This is a corrosive waste due to its low pH of <2.0 and an EP toxic waste due to contained hexavalent chromium.	

NOTE: This tank is located in acid reclaim area.

Waste Identification

All containers of hazardous waste generated **ON-SITE** are labeled by the generating department using the labels supplied with an Internal Waste Manifest. A copy of this manifest is enclosed as Figure 15. The labels state the internal manifest number and name of waste. The internal manifest, which describes the waste, its hazard, and directs its movement, accompanies the waste from the generating department to the storage area. The name of the waste and the manifest number are painted on the container when it arrives at the storage area and the internal manifest is filed in the Environmental Control Department (ECD) (Reference 1).

All containers received from **OFF-SITE** (INCO's Burnaugh, Kentucky plant) are labeled as required by EPA and DPT regulations and are accompanied by the required Hazardous Waste Internal Manifest. The name of the waste and the internal manifest number is painted on the drum when it arrives at the hazardous waste container storage area of the Huntington Plant and the manifest is filed in the ECD. Drums received from the Burnaugh, Kentucky plant, contain 1,1,1-Trichloroethane (EPA listed waste and coded as F001) and B-40 Baghouse dust (coded as D002).

Description of Containers

The containers used for storage of hazardous waste at INCO's Huntington plant meet DOT specifications 17-H and 17-E. The DOT 17-H are 55 gallon steel drums with removable head (open top) used for storage and transportation of hazardous waste in a solid state. The 17-E are non-removable head (closed top) drums with bung holes. These types of drums are used for the storage and transportation of liquid hazardous waste. The 17-E type drums are used to collect waste solvents in the less than ninety (90) day storage or collection areas prior to shipment off-site for disposal.

Condition of Containers

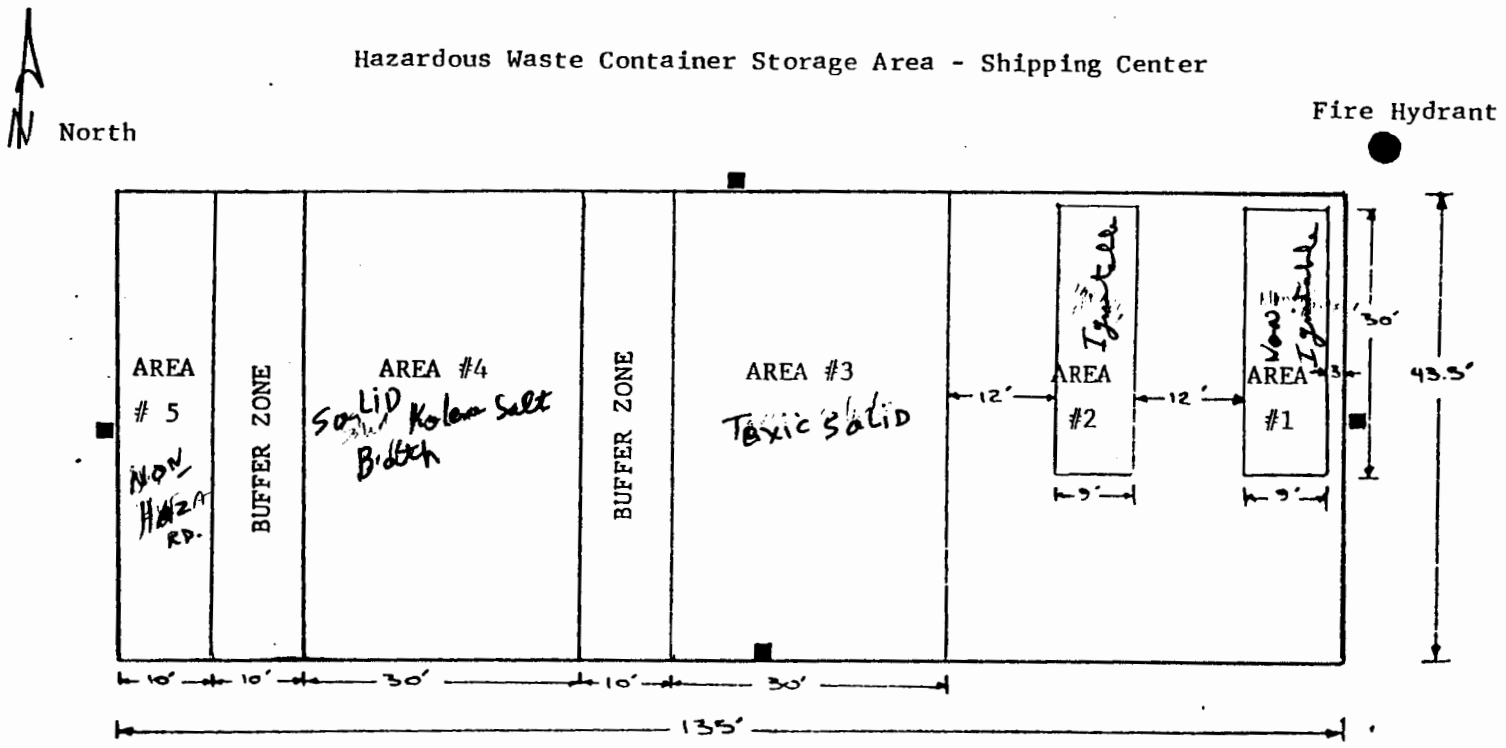
Containers stored in the permitted Hazardous Waste Management Unit, drum storage area and the satellite storage/collection areas were visually inspected for the presence of any hole, rust, bulking or structural failure during the VSI on January 20, 1992. All containers were found in good condition.

Secondary Containment System

A secondary containment system consisting of two (2) identical carbon steel pans mounted on a sloped asphalt base are used as secondary containment of hazardous waste drum storage areas Cell No. 1 and 2. The secondary containment is designed to promote drainage of accumulated liquids and rainfall. The design capacity of each pan is 1,170 gallons. The containment pans are equipped with steel rails which hold pallets of stored waste above the accumulated liquid to ensure that containers of waste are kept from contact with standing liquids. Each containment pan will be examined daily for the presence of accumulated liquids. Any accumulation will be examined by the Environmental Control Personnel (ECP) to determine if the accumulated liquid contains a hazardous waste or is just precipitation accumulation. The examiner will check the accumulated liquid for:

Figure - 14

Container Storage Area (shipping center) in Inco, Huntington Plant



■ Warning Signs

● Fire Extinquisher (mounted on building)

AREA #1: Proposed containment pan for storing drums of non-ignitable liquids (listed in Group C in Part 2 of this application).

AREA #2: Proposed containment pan for storing drums of ignitable liquids (listed in Group D in Part 2 of this application).

AREA #3: Section of concrete pad for storing drums of toxic solids (listed in Group B in Part 2 of this application).

AREA #4: Section of concrete pad for storing drums of solid Kolene Salt Bath Wastes (listed in Group A in Part 2 of this application).

AREA #5: Section of concrete pad for storing drums of non-hazardous waste and/or drums of waste suspected of being hazardous while analysis is being performed.

1. Discoloration: The stored solvents contain oil and/or paint either of which are easily detected visually.

2. Odor: The liquids stored are solvents which are easily detected by odor.

The containment pans are equipped with a locked drain valve controlled by the ECP. If no evidence of hazardous waste is detected in the accumulated liquid by the method stated above, the ECP will drain the liquid (accumulated precipitation) to a field drain which ultimately discharges to the City of Huntington Sewage System (POTW). INCO is permitted by the City of Huntington Sewage System (POTW), Water Pollution Control Permit number 0187017 was issued on April 1, 1988 for five (5) years. (Reference 12)

If hazardous waste is detected in the accumulated liquid, the waste will be pumped/bailed into 55-gallon drums approved for the storage of hazardous waste under the direction of the ECP, then placed in the proper section of the storage area. The remaining waste (which cannot be collected as a liquid), will be removed by placing an absorbent (oil-dry, speed-dry, sand, etc.) on the liquid, then placing the contaminated absorbent in 55-gallon drums approved for the storage of hazardous waste. These drums will then be placed in the proper section of the storage area under the direction of the ECP.

Storage of Wastes Which Do Not Contain Free Liquids

Some wastes stored in this area are solids which do not contain free liquids. These solids are stored on a concrete pad which is sloped to direct precipitation to field drains and ultimately to the City of Huntington Sewage System (POTW). Also all drums of wastes are mounted on wooden pallets which keep the drums elevated approximately four (4) inches above the concrete pad to ensure that the drums are kept from contact with any standing liquids.

2. Baghouse Dust Storage Area - Stores Department (closed)

Container Management Practices

This storage area was used for storing 55 gallon drums of baghouse dust from Air Pollution Control (APC) devices. The facility was located on the north side of INCO's store room department shown in Figure 1. The area is a covered concrete pad, enclosed on three (3) sides. It has an area of 8,944 square feet (104 X 86 feet). Non-hazardous wastes were also stored within this area (see Figure 16). The area had a storage capacity of 1,100 drums. Presently, this area is utilized for storage of raw products used in manufacturing processes. This unit was closed March 27, 1987. (Reference 6 and 7)

Secondary Containment System

The baghouse storage area consisted of a concrete floor in a building that is partially enclosed on three (3) sides and roofed which prevented most perception from falling directly on the stored wastes. Any run-on to the storage area was directed to a field drain which ultimately discharged to the City of Huntington Sewage System (POTW) to prevent standing liquids in the area. All wastes were placed on wooden pallets which elevated the waste containers approximately four (4) inches above the floor. This ensured that the containers were kept from contact with standing liquids.

Figure - 15

Internal Waste Transfer Manifest for Inco, Huntington Plant

THIS PAGE TO BE COMPLETED BY GENERATING DEPT.

HUNTINGTON ALLOYS, INC.
AN INCO COMPANY
INTERNAL WASTE TRANSFER MANIFEST

1203
MANIFEST NO.

MATERIAL NAME: _____

DEPARTMENT NAME: _____

DEPARTMENT NO.: _____

IF OIL, CHECK TYPE:

☐ SOLUBLE ☐ INSOLUBLE

☐ CHLORINATED ☐ OTHER _____

DESCRIPTION	HAZARDOUS	NO. OF CONTAINERS	ESTIMATED QUANTITY
☐ LIQUID ☐ SOLID ☐ SLUDGE ☐ _____	☐ YES ☐ NO *IF YES:* ☐ IGNITABLE ☐ CORROSIVE ☐ REACTIVE ☐ TOXIC ☐ OTHER _____	( ) 1000 GAL. ( ) 500 GAL. ( ) 55 GAL. ( ) _____	_____ GALLONS _____ POUNDS

TO TRANSPORTER: ☐ UNDERGROUND WASTE OIL TANK(S) ☐ LANDFILL (NON-HAZARDOUS)

DELIVER TO: ☐ SPENT ACID TANK ☐ NEUTRALIZING TANK ☐ SHIPPING CENTER (NW-3)

☐ B-50 FINISHING BLDG. - HAZARDOUS WASTE AREA ☐ B-30 OIL STORAGE AREA

☐ OTHER, EXPLAIN _____

HAVE YOU RECEIVED TRAINING IN THE PROPER HANDLING OF HAZARDOUS WASTES IN THE LAST TWELVE (12) MONTHS BY THE ENVIRONMENTAL CONTROL DEPARTMENT? ☐ NO ☐ YES IF YES, TRAINING DATE _____

I CERTIFY THAT THE MATERIAL BEING PRESENTED FOR TRANSPORTATION IS PROPERLY DESCRIBED ON THIS MANIFE HAS BEEN PLACED IN THE PROPER CONTAINER, AND EACH INDIVIDUAL CONTAINER HAS BEEN CORRECTLY LABELED

FOREMAN'S SIGNATURE: _____

EMPLOYEE NO.: _____ DATE: _____

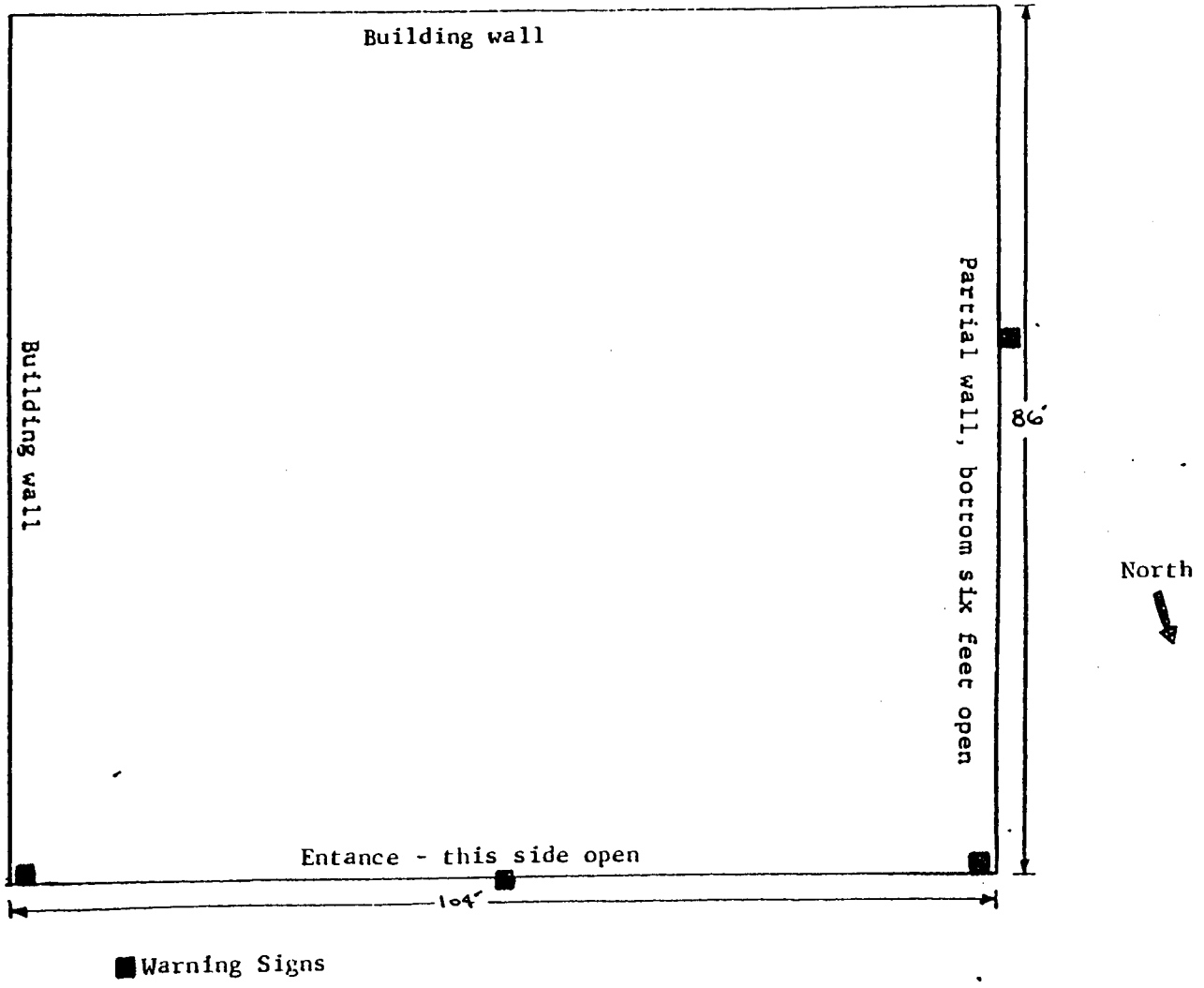
ILLEGIBLE OR INCOMPLETE MANIFESTS WILL BE RETURNED

MAIL THIS COPY TO THE ENVIRONMENT CONTROL DEPT. - HUNTINGTON

1203 MANIFEST NO. *MATERIAL:*	1203 MANIFEST NO. *MATERIAL:*	1203 MANIFEST NO. *MATERIAL:*	1203 MANIFEST NO. *MATERIAL:*
CONTAINER NO. 1	CONTAINER NO. 2	CONTAINER NO. 3	CONTAINER NO. 4

Figure - 16

Baghouse Dust Storage Area - (Stores Department) - Closed March 27, 1987.



3. Spent Acid Storage Tank - Acid Reclaim Area

Description of Tank

The acid reclaim area consists of an in-ground, open top, acid resistant brick lined tank with a total capacity of 55,000 gallons. The tank is located outside as shown in Figure 17 and is used to store a mixture of hazardous waste as described in Table 2 and non-waste by-products prior to reclamation of the contained metallics.

A picture of the tank and its surrounding area as included in part "B" application is presented as Figure 18. The tank's walls and bottom are constructed of steel reinforced concrete. The concrete is lined with an acid resistant brick and mortar lining to protect the concrete from the corrosive action of the stored waste. This brick lining extends up to two (2) feet of the tank's top. The upper unbricked two (2) feet of concrete is coated with a heavy layer of acid resistant paint. This tank was inspected by a professional engineer, Carroll D. Davidson, for structural integrity on January 13, 1983. His report indicated that after thirty (30) years of service the brick lining showed no appreciable deterioration and that the mortared joints between the bricks showed a maximum corrosion depth of 1.5 inches. Based on this observation, the lining is expected to provide adequate protection of the concrete walls and bottom for a minimum of twenty (20) years. (Reference 3)

Tank Management Practices

The materials added to and removed from this tank are processed in batches with no continuous feed or discharge lines. No piping diagram is supplied because all hazardous waste transferred to the tank is done using portable hoses and tank cars on a mini-railroad. No permanent piping has been or is planned to be installed for the hazardous waste management unit. (Reference 1)

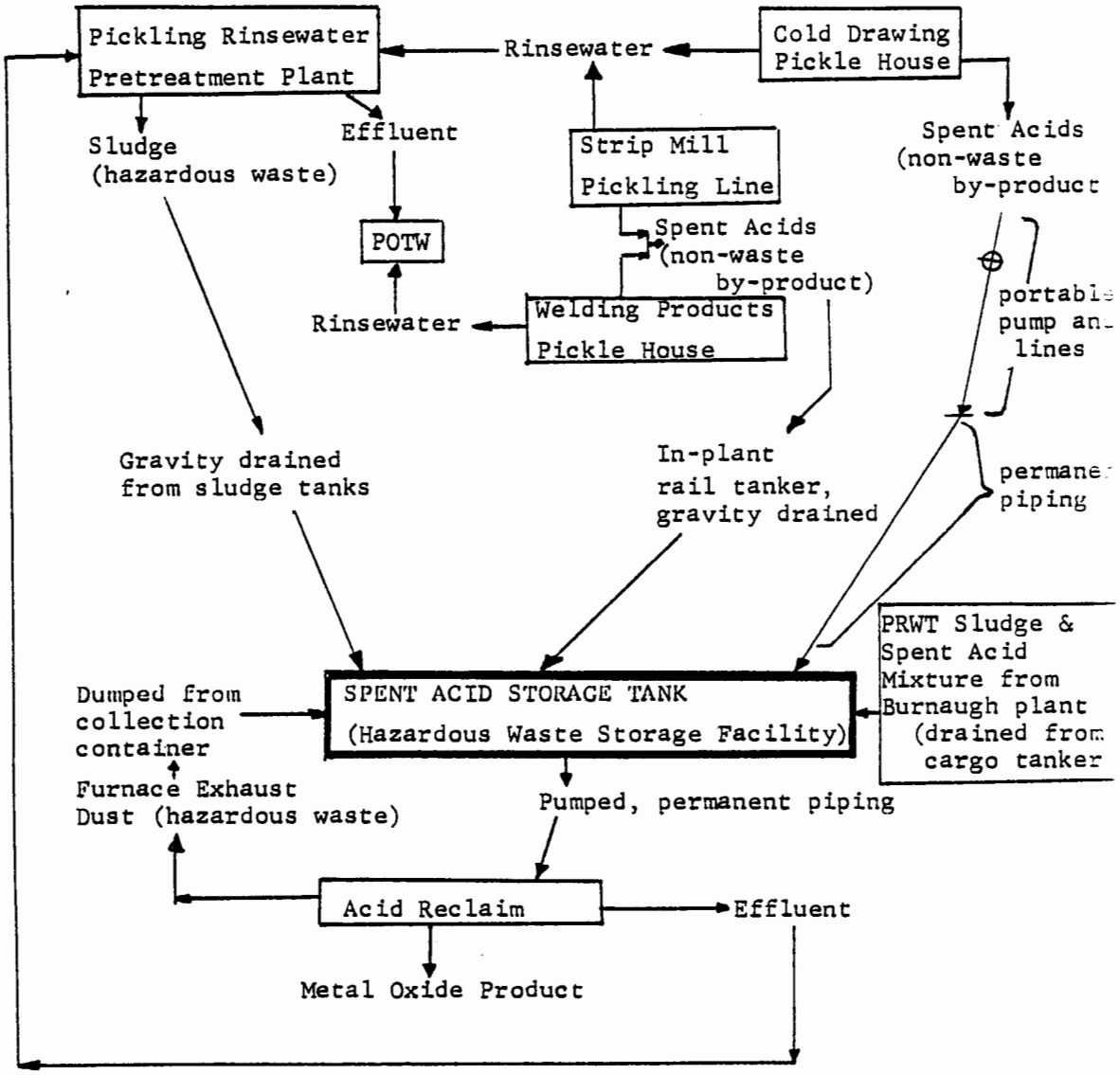
The tank is not equipped with any feed system, safety cut-offs or a by-pass system because all materials are added in batches with the operating personnel present to ensure that the tank is not overfilled. Also, there is no permanently installed complete pumping system for the batch dumps. Each tanker to be dumped must be individually connected to a portable pump prior to emptying into the storage tank.

Future plans include installation of a high level alarm in this tank which will be set to alarm when the liquid level in the tank is six (6) inches from the top of the acid resistant lining (this level is approximately thirty-six inches from the top of the tank). The alarm will sound at the storage tank and at two (2) remote locations where non-waste by-products are pumped from process tanks to the waste storage tank. This will ensure that any personnel adding materials to the tank are informed when the liquid level has reached its maximum allowable height. The tank is open top and therefore, is not equipped with vents or pressure control valves.

Figure - 17

Spent Acid Storage Tank - Process Flow

Inco, Huntington Plant



V. REGULATORY HISTORY

The first RCRA Part A application for the facility, filed under the Huntington Alloys, Inc. name, was submitted on November 17, 1980. The first complete RCRA Part B application was filed on Feberuary 25, 1983.

The tailing ponds, pickle rinsewater pre-treatment, soluble waste oil pre-treatment and final wastewater treatment plant are exempt per 40 CFR 260-264 and the West Virginia Hazardous Waste Management Regulations (WVHWMR). These units are exempt from WVHWMR per Section 2.176.1 and 2.176.2; however, they are subject to regulations under Section 402 or 307(b) of the Clean Water Act (CWA).

INCO, has been classified by the WV DEP as a hazardous waste storage, treatment and disposal (TSD) facility because characteristic and listed hazardous waste has been stored and/or disposed at the facility. A RCRA hazardous waste management (HWM) permit was issued on June 25, 1984 permitting INCO to operate three (3) HWM units consisting of two (2) container storage areas (hazardous waste containers and Baghouse dust containers) and an open top storage tank (Monel Tank).

At the present time, there are ten (10) setellite hazardous waste storage areas at the facility where hazardous wastes are generally stored and/or collected for less than 90 days. A list of satellite areas are included in Table 1 as AOC-11 (Area Of Concern No. 11).

The facility has an Industrial Waste Discharge (IWD) permit # (0187017) issued by the City of Huntington's Sanitary Board to discharge treated wastewater from its wastewater treatment plant to the city's sewer system. This permit application was refiled on December 18, 1985. This permit became effective as of April 1, 1988 and will remain in effect until April 1, 1993.

An Industrial Waste Landfill permit # (IWL6325-91) was reissued to INCO on September 20, 1991, to operate a Tailing Pond at the facility. This permit was issued by the West Virginia Department of Natural Resources, **WRS**, National Pollutant Discharge Elimination System offices. As required per this permit INCO must perform groundwater monitoring sampling quarterly in the area of this unit.

As required per Permit No. IWL-6312-85, issued to INCO on October 9, 1985, to operate a tail pond known as "West Tail Pond", a total of four (4) monitoring wells were constructed in 1985. However, the groundwater monitoring program performed since 1985 revealed that the samples collected and analyzed were not representative of groundwater and results were unacceptable to the West Virginia Office of Water Resources, Industrial Waste Section. Consequently, INCO abandoned all four (4) wells and reinstalled four (4) new monitoring wells on June 4, 1992. This action was included in the Permit as a Major Modification. (Reference 13)

Underground Storage Tank

Per a letter dated September 5, 1991, INCO infomred the OWM that the only currently active underground units at INCO's Huntington facility that were installed before 1969 are Tank No. W-4, a 50,000 gallon concrete and acid brick tank installed in 1948, and W-5, a 8,000 gallon lined concrete tank installed in 1957. W-4 contains hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act and is permitted to store hazardous waste. The W-5 tank is a part of the wastewater treatment facility. Therefore, both tanks are exempt from subtitle I under 40 CFR 280.10 as incorporated by reference into West Virginia's regulations. (Reference 23)

Air Quality Control

Inco Alloys International, Inc. (INCO) has been in operation since the Fall of 1922. They have had a groundfather type of Air Pollution Control Permit from the West Virginia office of Air Quality Control. Inco also received a construction permit for air pollution control equipment, for the Huntington Plant, in 1985. (Reference 14)
The baghouse, a hazardous waste dust collecting unit, was closed in 1987.

INCO was issued an Air Quality Control Permit to construct and operate a carbon reactivation processe at the facility on March 4, 1982. A Cease and Desist Order was filed on July 10, 1985, by the West Virginia Air Pollution Control Commission due to the change in ownership of the facility (June of 1985) from the EEE Corporation to CRI. The order was filed over the issue of whether the Air Quality Control Permit was transferable to CRI when the facility was transferred. A new Air Quality Control Permit was issued to CRI to operate the carbon reactivation processe. (Reference 14)

VI REGULATORY INSPECTIONS

There are no records available concerning inspections conducted by the Federal and/or State regulatory agencies prior to November 1980. The Part A application for a (HWM) permit was submitted to the EPA Region-III, Philadelphia office on November 17, 1980. (Reference 1)

Since 1982, the Compliance Evaluation Inspections (CEI), at INCO's Huntington plant has been conducted annually by WVDEP, OWM inspectors.

The CEI conducted on November 17, 1988, cited the facility for two (2) violations. On January 26, 1989, an Administrative Order was issued. The basis for the order was determined as "Poor condition of stored hazardous waste drums" in the permitted drum storage area.

The facility was cited for a number of violations during the CEI conduct on November 13 through 16, 1990 and January 9, 1987. Although, most of the violations cited were of an administrative nature, two orders citing the violations were issued on October 7, 1991 and January 26, 1989. (References 10 and 11)

VII. RELEASE HISTORY

On June 15, 1987, a leaking drum was discovered during the transfer of drums to the permitted container storage area. The leaking container was placed in an over packed drum during storage and shipment off-site.

A leaking storage drum containing mixed laboratory liquid hazardous waste was discovered on December 16, 1988, in the permitted container storage area. The drum developed a pin size hole and waste leaked out from the hold during storage. The leaking drum was placed in an over packed drum and shipped off-site for disposal.

On July 20, 1990, Inco reported a release of approximately 500 gallons of Sulfuric Acid from sulfuric acid storage tank located in the final wastewater treatment plant area. As a result, spill acid traveled out of the building, where the tank is located, onto the unprotected area (Dirt area) to the nearby open ditch. The spilled acid reached the sewer system and consequently was discharged to the City of Huntington POTW thru the open ditch. The spill acid reached was neutralized by adding soda ash to the liquid waste present in the open ditch and unprotected area. This incident happened during the plant shut down, vacation time. The spill was discovered by a guard on duty and was reported to the required agencies after preliminary remedial action was performed. (Reference 21)

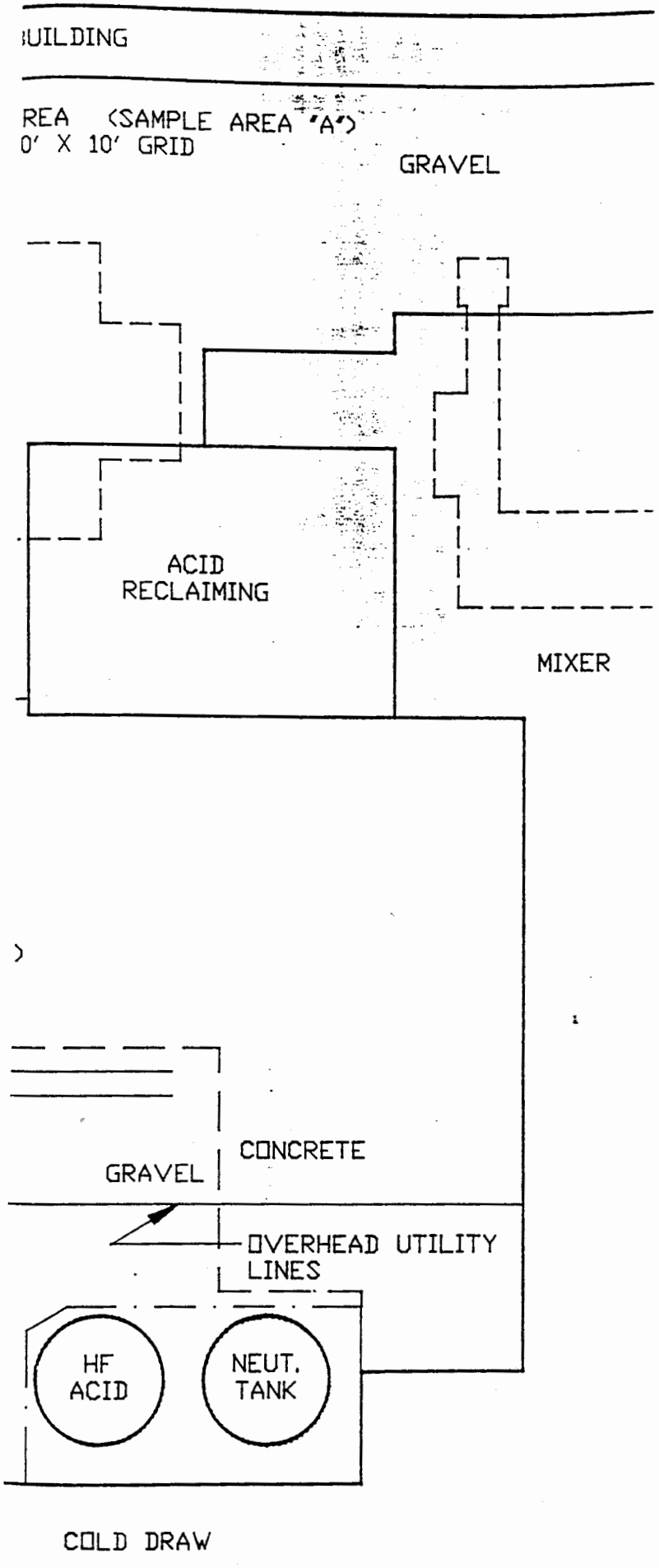
During November 13 & 16, 1990 compliance inspection conducted by West Virginia Division of Environmental Protection personnels a spillage of acid reclaim furnace exhaust dust was discovered. The spillage of hazardous waste dust on the gravel lot in the acid reclaim area was extensive. The heaviest contamination appeared to be near the acid reclaim collection buckets (see Figure 18).

Inco retained TERRADON Corporation located in Nitro, West Virginia to conduct a site characterization for two separate sampling areas near the waste acid tank and the acid reclaiming operation. Sampling of the sites commenced on January 16, 1992. The sampling was in response to a planned investigation to characterize the site for the present of chromium.

Based on the data generated, Terradon did not recommend a further remediation of the contaminated areas. (Reference 19)

Inco reported a release of approximately 100 gallons of spent Hydrofloric and Nitric Acid. The spill was first noticed on August 10, 1992 at 4:00 PM by facility personnel, at which time it was immediately reported to Office of Waste Management. Waste was stored in a railroad car which routinely is used to store spent acid. Inco located a tanker truck and offloaded the railcar contents (approximately 2500 gallons) to dispose off-site.

On August 11, Inco advised an OWM representative that the acid had been offloaded to a tanker truck brought in from their Burnaugh, Kentucky facility. The offloading had been completed around 11:00 p.m. on August 10, 1992 and the material was taken to the Burnaugh, Kentucky facility's spent acid storage tank prior to routine processing. None of the spilled acid appeared to have migrated past the general vicinity of the leaking tank car. Inco advised that the spilled spent acid, mixed with soda ash and a small amount of gravel (railroad ballast) would also be processed through the metals recovery unit. (Reference 25)



LEGEND

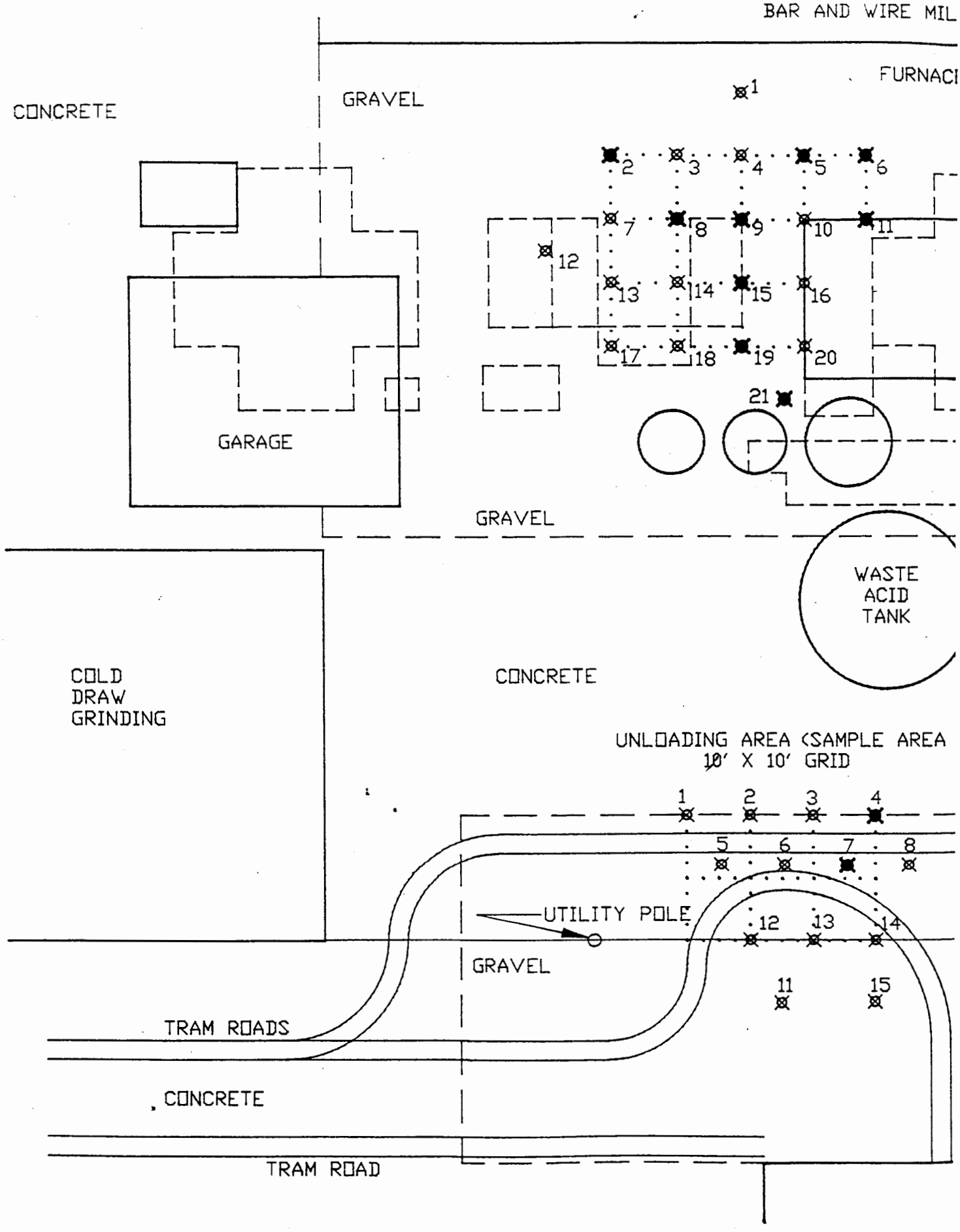
Sample Locations

Buried Foundations

Points of Detection

Figure 18

Spill site characterization,
soil sampling points.
Inco, Huntington Plant


BAR AND WIRE MIL
FURNACI
CONCRETE
GRAVEL
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
GARAGE
GRAVEL
WASTE
ACID
TANK
COLD
DRAW
GRINDING
CONCRETE
UNLOADING AREA (SAMPLE AREA
10' X 10' GRID
1
2
3
4
5
6
7
8
UTILITY POLE
12
13
14
GRAVEL
11
15
TRAM ROADS
CONCRETE
TRAM ROAD

When the new TCLP toxicity test was adopted, the WWTP sludge was retested using the new procedures, and the new tests again indicated the sludge to be a non-hazardous waste. In July 1991, the City of Huntington requested that INCO perform a TCLP test for metals on the WWTP sludge on a monthly basis prior to disposing at the City of Huntington's Deitz Hollow landfill. The monthly testing began in July, 1991 through January 1992 and indicated the sludge to be a non-hazardous waste. The samples were composties taken from various locations areound the circumference and on top of the WWTP sludge storage pile at the on-stie Temporary Tailings Storage Area. (Reference 18)

On March 26, 1992, INCO's representative, Mr. W. J. Healy, informed the OWM of samples collected from a large pile of wastewater treatment plant sludge stored in Temporary Tailings Storage Area indicated that the material was a characteristic hazardous waste for chromium toxicity. The samples were collected from the outer surface of the large sludge pile which was estimated to be about 200 tons. The analyses ranged from 7.0 mg/1 to 100 mg/1 of chromium on the TCLP tests for three separate samples. At that time, the sludge pile was covered with a tarp and hazardous waste signs posted. The WWTP sludge pile was approximately 20'x 50'x 15' high.

In a subsequent telephone conversation with Mr. Mike Dorsey of the OWM, on April 3, 1992, it was discussed that the above outer surface samples may not be representative of all of the material in the pile since the sludge was generated over an approximate two month time period. Future, since the sludge from wastewater treatment plan had tested non-hazardous on previous samples, it was believed that the smaples in question smay have reflected an upset at the treatment plant rather than an ongoing condition. OWM agreed to subdivide the large sludge pile by approximate time generated for additional sampling and analysis. The results of the additional sampling were as follows:

Outer layer.....4.56 mg/1 Cr
Middle layer.....2.48 mg/1 Cr
Core layer.....5.43 mg/1 Cr

Due to time constraints in trying to complete the above subdivision and ship the samples off for analysis before the weekend, the three subdivisions were not proportional and the remaining core layer was as large as the other two layers combined. In order to obtain a more representative sample of the reamining core layer, it was further subdivided by approximate time generated for sampling and analysis. The results of these samples were as follows:

Core Pile, Sub-Pile #1.....4.33 mg/1 Cr
Core Pile, Sub-Pile #2.....9.97 mg/1 Cr
Core Pile, Sub-Pile #3.....11.30 mg/1 Cr
Core Pile, Sub-Pile #4.....6.93 mg/1 Cr

As a result of the above analyses, the material identified as Core Pile Sub-Piles #2, #3, and #4 were sent off-site and disposed as a hazardous waste.

The remaining material from the original large sludge pile, identified as Outer Layer, Middle Layer, and Core Pile Sub-Pile #1, and indicated to be non-hazardous in the above analyses were disposed of in the City of Huntington's Landfill, on September 22, 1992 (Reference 18).

During the VSI, a leaking drum of waste hydraulic oil was noticed in the Container Storage area. The leaking drum was located on the mini rail car. The gravel in the vicinity of the railroad was discolored and vegetation was distressed. Also, a leaking dumpster outside of cold draw area was observed. According to facility representatives (they claimed) it was an employee's error and remedial action will be taken to clean the dumpster prior to disposal of the waste contained in the dumpster in the municipal landfill.

Also, the area of spillage of the Acid Reclaim Furnace Exhaust Dust on the gravel lot in the acid reclaim area was inspected during the November, 1990 CEI and VSI. The spillage was found to be extensive with heaviest contamination appeared to be near the acid reclaim collection buckets. Inco retained Terradon Corporation located in Nitro, West Virginia to conduct a site assessment and determine the extent of the soil contamination. The work plan for site assessment and remediation were submitted to West Virginia Division of Natural Resources, Waste Management Section for review and approval on January 10, 1992 and March, 1992, respectively. (Reference 19) Based on the aforementioned report, subsurface soil was found to not be contaminated and no further corrective action remediation was suggested.

Inco informed the OWM representative that the company is now treating the sludge with TSP (Triple Super Phosphate) in the sludge slurry tank prior to the filter belt process. The TSP is binding up the chrome to render the sluge non-hazardous.

As shown in Figure 19, Drawing Number D-26320, characteristic hazardous waste is treated in all pretreatment plants except soluable waste oil. (Reference 17)

VIII. SOLID WASTE MANAGEMENT UNITS

A total of sixteen (16) Solid Waste Management Units (SWMU's) and eighteen (18) areas of concern (AOC) are identified. The representatives of OWM (Office of Waste Management) visited the facility on January 20, 1992 and conducted the Visual Site Inspection (VSI) when the listed SWMU's were identified and documented. The SWMU's listed in Table 1 were reported as Solid Waste Management Units in Part B Application submitted in 1981 in conjunction with applying for RCRA Hazardous Waste Management Permit and the West Virginia Hazardous Waste Survey Report conducted in February of 1982.

A detailed description of each Solid Waste Management Unit identified is included as follows:

SOLID WASTE MANAGEMENT UNITS (SWMU's)

Inco Alloys International, Inc.

Huntington, West Virginia

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 001

UNIT NAME: Container Storage Area

UNIT DESCRIPTION: This storage area is used for storage of drums of hazardous wastes as identified in 40 CFR Part 261. The unit is located on the Northeast corner of the facility. The storage area occupies a rectangular area of approximately 135 feet by 43.5 feet or 5,873 square feet. All hazardous wastes stored within this facility are to be containerized in containers approved by DOT. Containers containing liquid wastes are stored within the metal pans. The storage Cell No. 1 and Cell No. 2 have metal pans as secondary containment to contain any leak and/or rupture developed during storag[illegible] a drum.

RFA, RFI CORRESPONDENCE

DATE: Nov. 17, 1980

D[illegible]RE: Scheduled for closure by January 2005

[illegible]GED: The following are hazardous wastes stored in the Container [illegible]ea:

[illegible]olene Salt bath in Cell No. 4

. Toxic Solid in Cell No. 3

3. Ignitable Hazardous waste in Cell No. 2

4. Non-Ignitable hazardous waste in Cell No. 1

RELEASE CONTROLS: Two metal pans for liquid waste storage drums.

HISTORY OF RELEASES: Unknown

REFERENCES: Part B application and Visual Site Inspection.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 002

UNIT NAME: Baghouse Dust Storage Area (Closed on March 27, 1987)

UNIT DESCRIPTION: This storage area was used for the storage of boxes of baghouse dust which was hazardous waste by characteristic. The unit was located on the North side of the Stores Department in the "Nickel Storage Pad" area. The storage area was a concrete pad roofed over with 104 feet by 86 feet dimensions (8,944 square feet). All hazardous waste stored within this unit were containerized in approved DOT shipping containers. This unit was closed in March, 1987; however, the State of West Virginia, Department of Natural Resources, Waste Management Section has never received a final closure certification from the permittee.

DATE OF START-UP: Unknown

DATE OF CLOSURE: March 27, 1987

WASTE MANAGED:
1. Melting Department Baghouse Dust
2. B-40 Baghouse Dust

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: Closure plan and unit process description included in Part B application.

ACTION RECOMMENDED: No further action is recommended since the storage area had a concrete floor and was roofed during its useful life.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 003

UNIT NAME: Nitric - HF Storage Tank (Closed January, 1992)

UNIT DESCRIPTION: This unit was an 8000 gallon storage tank located in Acid Reclaim Pretreatment, metals recovery, area. Cold Draw spent nitric - HF acids, Corrosive hazardous waste, was received and stored in this tank. The tank was an inground Fiber glass storage tank with concrete secondary containment. The tank was closed and removed from the ground in January, 1992. The final closure certification has not been submitted to this office.

DATE OF START-UP: About 1957

DATE OF CLOSURE: January, 1992

WASTE MANAGED: Nitric Spent Acid, Corrosive hazardous waste

RELEASE CONTROLS: Concrete secondary containment.

HISTORY OF RELEASES: The concrete secondary containment for the this unit was inspected visually during VSI. There were signs of releases and concrete was severely contaminated. A large hole was notice on the body of the tank.

REFERENCES: Drawing number D-26320 submitted on Nov. 07, 1992 and VSI visit to the facility.

ACTION RECOMMENDED: At a minimum one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 004

UNIT NAME: Waste Holding Tank

UNIT DESCRIPTION: This is a 8000 gallons hazardous waste storage tank located in Acid Reclaim Pretreatment, metals recovery, area. The hazardous waste received from off-site facility, INCO's Burnaugh plant, are stored in this tank prior to equalization. This unit is not a permitted RCRA hazardous waste management unit.

DATE OF START-UP: Unknown

DATE OF CLOSURE: Still in operation

WASTE MANAGED:
1. Alkaline Cleaners
2. Kolene Rinse, characteristic hazardous waste.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: Drawing number D-26320 submitted on Nov. 07, 1992.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 005

UNIT NAME: Spent Acid Storage Tank System

UNIT DESCRIPTION: This unit consisted of three below ground acid brick - lined concrete storage tanks with a total capacity of approximately 71,000 gallons located in Acid Reclaim Pretreatment area. The East tank, known as Monel Storage Tank, has 55,000 gallons, the Southwest tank has 8,000 gallons and Northwest tank has 8,000 gallons capacity. At the present, only the Monel Storage Tank is in operation. The other two tanks, Southwest and Northwest storage tanks were closed in 1982 and the closure was certified January 17, 1983.

DATE OF START-UP: 1948

DATE OF CLOSURE: Two 8000 gallon tanks were certified closed on January 17, 1983. One tank, Monel Storage tank, is still in operation.

WASTE MANAGED: The following is list of waste stored in the tanks:

1. Spent Pickling Acids.
2. Sludge from the pickling rinse water.
3. Copper Nickel spent plating solutions.
4. Dust from Air Pollution control units.
5. Spent Pickling solution from Off-site (Burnaugh plant).

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: Part B application and closure plan submitted to EPA region III office.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 006

UNIT NAME: Neutralization Tank

UNIT DESCRIPTION: This treatment tank is located in the Acid Reclaim Pretreatment area, metals recovery, has a capacity of 5,000 gallons. The hazardous waste stored in Monel tank is pumped to this tank for Neutralization process.

DATE OF START-UP: Unknown

DATE OF CLOSURE: Scheduled for closure by January, 2005

WASTE MANAGED: The following hazardous waste are neutralized in this unit:

1. Spent Pickling Acids.
2. Sludge from the pickling rinse water.
3. Copper Nickel spent plating solutions.
4. Dust from Air Pollution control units.
5. Spent Pickling solution from Off-site (Burnaugh plant).

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: During VSI, evidence of overflow was noticed on the outside wall and floor in the immediate area of the tank.

REFERENCES: Visual Site Inspection (VSI) and drawing number D-26320

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 007

UNIT NAME: Old West Tailing Pond (Closed in 1971)

UNIT DESCRIPTION: This unit was a surface impoundment used for storage of hazardous wastes for nearly twelve (12) years. The wastes stored were liquid. The impoundment was closed in place. There is no record to prove that the sludge was stabilized when the covering cap was placed on the lagoon. The size of this unit is unknown. It was located in the northwest portion of the facility.

DATE OF START-UP: 1958

DATE OF CLOSURE: 1971

WASTE MANAGED: The following is a list of hazardous wastes stored in this unit:

1. Neutralized spent acids, D007, D008, liquid.
2. Alkaline permanganate solution, D002, D007, liquid.
3. Oxalate solution, D007, liquid.
4. Borax coating solution, D007, liquid.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous Waste Survey conducted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 008

UNIT NAME: Old Lagoon No. 1 (Closed in 1958)

UNIT DESCRIPTION: This unit was a surface impoundment used for storage, treatment, and disposal of hazardous wastes for nearly ten years. The wastes stored were both liquid and solid. The treatment applied to the wastes was of Chemical/Biological type. The impoundment was closed in place. The sludge within the impoundment was not stabilized when the covering cap, consisting of general fill materials, was placed on lagoon. The impoundment occupied an estimated area of 0.24 acres. The unit was located in the Northeast portion of the facility. The lagoon construction did not include a liner of any type. Presently, the Equalization tank known as Liquid Waste Pretreatment Tank is erected at this location.

DATE OF START-UP: 1949

DATE OF CLOSURE: 1958

WASTE MANAGED: The following is a list of hazardous wastes stored in the unit:

1. Liquid Spent Acid characterized as D002, D007, and D008.
2. Liquid Alkaline Cleaning Solutions characterized as D002.
3. Liquid Permanganate Solution characterized as D002 and D007.
4. Solid Lead Compounds characterized as D008.
5. Solid Chromium Compounds characterized as D007.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous waste Survey Report submitted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 009

UNIT NAME: Old Lagoon No. 2 (Closed in 1980)

UNIT DESCRIPTION: This impoundment was used for storage, treatment, and disposal of hazardous wastes for ten (10) years. This unit occupied an estimated area of 2400 square feet. The sludge within the impoundment passed the EP Toxicity test, per a facility representative. However, there is no documentation of the beforementioned test available. During the active life of this unit, non-soluable waste oil was skimmed off and sold to off-site buyers for recycling.

DATE OF START-UP: 1970

DATE OF CLOSURE: 1980

WASTE MANAGED: The following is a list of hazardous wastes stored in the Lagoon No. 2:

1. Liquid Spent Acid characterized as D002, D007, and D008.
2. Liquid Alkaline Cleaning Solutions characterized as D002.
3. Liquid Permanganate Solution characterized as D002 and D007.
4. Oxalate Solution characterized as D002 and D007.
5. Borax Coating Solution characterized as D007.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous Waste Survey Report submitted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 010

UNIT NAME: Old Lagoon No.3

UNIT DESCRIPTION: This unit was a surface impoundment used for storage of wet scrubber wastewater. The Acid Reclaim Pretreatment unit got on fire in 1978 which caused the process of sludge dewatering and sludge roasting to slow down. Then, the unit was constructed to hold wet sludge and water from wet scrubber unit. The unit was about 700 feet square in area and about three (3) feet deep.

DATE OF START-UP: April, 1978

DATE OF CLOSURE: August, 1978

WASTE MANAGED: Wet hazardous waste sludge and scrubber water.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous Waste Survey Report submitted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 011

UNIT NAME: Landfill (Closed in 1964)

UNIT DESCRIPTION: This unit was a landfill used for disposal of hazardous wastes. Solvents and Cyanide Salt (F wastes) and characteristic wastes (D wastes) were disposed of in this unit for fourty-four (44) years. The landfill was closed in 1964. A layer of asphalt and/or concrete is placed on the capped landfill. The wastes were left in place at the time of closure.

DATE OF START-UP: 1920

DATE OF CLOSURE: 1964

WASTE MANAGED: The following waste streams were disposed of in this unit;

1) Cyanide Bearing Heat-treating Salts, F011, Solid.
2) Kolene Salt Bath, Oxalate and Permanganate Sludges, D007, Solid.
3) Kolene Salt Bath, Oxalate and Permanganate Sludges, D007, Solid.
4) Solvents F001, F002, F003, F005 and D001 Liquids.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous Waste Survey Report submitted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 012

UNIT NAME: Waste Pile (Closed in 1978)

UNIT DESCRIPTION: An area adjacent to Old Lagoon #3 was used for storage of Tailing Sludge and other unspecified non-hazardous wastes.

DATE OF START-UP: 1974

DATE OF CLOSURE: 1978

WASTE MANAGED: Unspecified Non-Hazardous solid waste and tailing sludge.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: West Virginia Hazardous Waste Survey Report submitted in 1982.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit. Also, if warranted, a groundwater monitoring program should be implemented.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 013

UNIT NAME: Sulfuric Acid Spill Area

UNIT DESCRIPTION: Area of Sulfuric Acid spill in July, 1990. The spill capacity was absent 300-500 gallons of pure sulfuric acid.

DATE OF START-UP: July, 1990

DATE OF CLOSURE: July, 1990

WASTE MANAGED: Spilled Sulfuric Acid

RELEASE CONTROLS: None

HISTORY OF RELEASES: This spill was never reported to OWM.

REFERENCES: Emergency Response Spill report and facilities representatives during VSI.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in the vicinity of this unit.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 014

UNIT NAME: Multihearth Roasting Furnace Area

UNIT DESCRIPTION: The area around exit door of Multihearth Roasting Furnace was contaminated with spilled characteristic hazardous waste. A sampling of soil in the area was conducted in March, 1992. Low level contamination was found.

DATE OF START-UP: Unknown

DATE OF CLOSURE: March, 1992

WASTE MANAGED: Contaminated soil by characteristic (chromium) hazardous waste.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: Compliance Evaluation Inspection conducted in November, 1991.

ACTION RECOMMENDED: Based on the result of the investigation of March, 1992, no further action is recommended.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 015

UNIT NAME: Barium Chloride Area (Closed)

UNIT DESCRIPTION: Barium Chloride Salt furnaces. This salt was used in heating tanks in the area of this unit. The hazardous waste generated was disposed of in the landfill which was closed in 1964. The method of disposal after 1964 is unknown.

DATE OF START-UP: Unknown

DATE OF CLOSURE: 1985

WASTE MANAGED: Barium Chloride Salt, characteristic hazardous waste.

RELEASE CONTROLS: Unknown

HISTORY OF RELEASES: Unknown

REFERENCES: VSI visit conducted in January, 1992.

ACTION RECOMMENDED: This unit must be closed properly. The existing furnaces and all hazardous wastes must be removed and extinct of contamination release, if any, to ground and groundwater. This should be determined by soil and groundwater sampling and analysis.

SOLID WASTE MANAGEMENT UNITS (SWMU's)
Inco Alloys International, Inc.
Huntington, WV

SWMU No.: 016

UNIT NAME: Existing West Tailing Pond

UNIT DESCRIPTION: This unit is located in the western corner of the facility. It is permitted by the Office of Water Resources, Industrial Waste Branch. An application for permit was submitted in 1974 and again in 1985.

DATE OF START-UP: Prior to 1974

DATE OF CLOSURE: Presently in operation.

WASTE MANAGED: Sludge from Wastewater treatment plant is stored in this for dewatering prior to disposal in the Huntington Landfill. Based on EP toxicity sampling and analysis, this waste was characterized as Non-Hazardous.

RELEASE CONTROLS: Unknown. There are four (4) monitoring wells as required by WV OWR, NPDES Permit.

HISTORY OF RELEASES: Unknown. However, sampling of stored sludge in March, 1992 revealed that the sludge pile was mostly hazardous waste.

REFERENCES: Correspondence from facility to the OWM in regard to sampling of stored sludge in the west tailing pond in Feb., 1992.

ACTION RECOMMENDED: At a minimum, one (1) round of soil sampling should be performed in order to determine the status of the subsurface soil in this unit. Also, if warranted, a groundwater monitoring program investigating hazardous wastes releases to the groundwater should be implemented.

XI. REFERENCES

1. Huntington Alloys, Inc., **Hazardous Waste Permit Application, Parts A & B, November, 1980**, as revised May 21, 1981, May 27, 1981, August 11, 1981, and May 17, 1982.

2. J. W. Barta, Huntington Alloys, letter to Regional Administrator, EPA Region III, Re.: **two rectangular waste acid storage tanks clsoure**, January 17, 1983.

3. Carrol D. Davidson, Huntington Alloys, letter to West Virginia Division of Water Resources, Re.: **Spent Acid Storage Tank structural integrity**, January 13, 1983.

4. West Virginia Division of Water Resources, **Hazardous Waste Management Permit** issued to Huntington Alloys, Inc., June 25, 1984.

5. C. E. Manilla, Huntington Alloys, letter to West Virginia Division of Water Resources, Re.: **Company's name change**, October 19, 1984.

6. Shad Kianouri, West Virginia Division of Water Resources, letter to Huntington Alloys International, Inc., Re.: **Closure Plan for Baghouse Dust Storage Area**, January 15, 1987.

7. J. W. Brata, Huntington Alloys International, Inc., letter to West Virginia Division of Water Resources, Re.: **Closure Certification for Baghouse Dust Storage Area**, May 27, 1987.

8. Wayne Wang and David L. Bumgarner, Kemron Environmental Services, Analytical Report for Inco Alloys, submitted to West Virginia Division od Waste Management, Re.: **Hurrican Volunteer Fire Department site**, November 20, 1987.

9. J. W. Barta, Inco Alloys International, Inc., letter to West Virginia Division of Waste Management, Re.: **Analytical result on soil samples from Fire Training Pit at Hurrican Volunteer Fire Department**, December 10, 1987.

10. Carrol Cather, West Virginia Waste Management Section, letter to Inco Alloys International Inc., Re.: **Draft Administrative Order**, October 7, 1991.

11. John M. Meek, West Virginia Waste Management Section, letter to Inco Alloys International Inc., Re.: **Draft Administrative Order**, January 26, 1989.

12. Robert R. Wilson, Huntington Sanitary Board, **Industrial Waste Discharge Permit** issued to Inco Alloys International, Inc, (Permit No.: 0187017), April 1, 1988.

13. West Virginia Division of Water Resources, **Industrial Waste Section issued permit to Inco Alloys International, Inc. to operate an industrial tailing pond (IWL-6312-85)**, October 9, 1985.

14. West Virginia Air Pollution Control Commision, **Operating Permit** issued to Inco Alloys International, Inc., .

15. West Virginia Waste Management Section **generator and TSDF inspection reports** of Inco Alloys International, Inc., Huntington plant, April 14, 1982, and subsequent dates: May 6, 1983, June 25, 1984, Feb. 11, 1985, March 27, 1986, January 9, 1987, June 12, 1987, August 19, 1987, December 30, 1987, November 9, 1988, January 26, 1989, November 13 & 16, 1990, October 7, 1991 and March 30, 1992.

16. W. L. Healy, Inco Alloys International, Inc., letter to A. S. Talebi, West Virginia Office of Waste Management, Re.: **Manufacturing Process Description**, Feb. 17, 1993.

17. W. L. Healy, Inco Alloys International, Inc., submittal to West Virginia Office of Waste Management, Re.: **Drawing No. D-26320, Inco Wastewater Treatment System**, Nov., 1991.

18. W. L. Healy, Inco Alloys International, Inc., letter to A. S. Talebi, West Virginia Office of Waste Management, Re.: **Sludge Disposal** , October 27, 1992.

19. W. L. Healy, Inco Alloys International, Inc., letter to A. S. Talebi, West Virginia Office of Waste Management, Re.: **Acid Reclaiming Operation Site Characterization Sampling Results**, May 1, 1992.

20. Office of Rediological Weahter Report for Huntington Area, 1991.

21. W. L. Healy, Inco Alloys International, Inc., letter to Office of Emergency Response, Re.: **Sulfuric Acid Spill Report**, July, 1991.

22. **West Virginia Hazardous Waste Survey**, Nov., 1982.

23. W. L. Healy, Inco Alloys International, Inc., letter to Gil Sattler, West Virginia Office of Waste Management, Re.: **Information on USTs**, September 5, 1991.

24. West Virginia Division of Water Resources, Industrial Waste Section reissued **permit to Inco Alloys International, Inc. to operate an industrial tailing pond (IWL-6325-91)**, September 30, 1991.

25. West Virginia DEP, Office Waste Management **Spill follow up inspection reports** of Inco Alloys International, Inc., Huntington plant, August 11, 1992.